

IND

# MODEL CAR *Science*

October, 1969

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BUILD A U.S.R.A.  
1/24 SCALE  
WINNER  
THE LATEST  
MODEL  
BUILDING TIPS



SCALE:  
TYPE 33 ALFA



# dig the dragon wagon

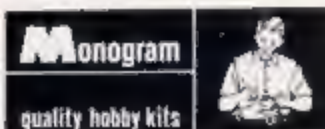
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# MODEL CAR SCIENCE

Volume 7, Number 10



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4/Model Car Science

# Model Mail

## BEGINNER'S BASICS

In reading your July issue, I noticed a letter from a Mr. Chuck Clayton regarding MCS' coverage of basic building items. Ever since I can remember, MCS stood for and by the beginner, which I can say I am very grateful for. My reply to Mr. Clayton would be that not everybody knows what he might. The raw novice needs a little advice now and then. MCS furnishes this "helping hand".

Bob Raynor  
Brooklyn, N.Y.

That's a pretty fair assessment of our position, too, Bob. We do try to include something in every issue for the experienced modeler as well, even if only a photo or description of the latest in club or pro chassis designs or detail ideas.

## SEARCH FOR SCALE PLANS

Why have the scale plans that used to appear in *Model Car & Track* been discontinued? Those, and the track plans, were one of the best features of MC&T or MCS.

Dana Stahl  
Visalia, Calif.

We received enough letters, like yours, Dana, to indicate that a good number of our readers want scale plans. We hope the Ferrari 612 in the September issue will open a floodgate of letters asking for more. If they do, we're quite an exciting schedule of plans on tap. We'd like to hear from more of you who want track plans as well.

## COLOR ME STP

I'm building a model of the STP Indy Turbine car, but I don't feel the red color of the kit plastic is correct. So far, no one in any of the car or hobby shops has been able to tell me the exact shade. Can you suggest how I might get the true "STP red"?

Eric Belhuke  
Wilmington, Ill.

The STP cars are usually painted in a shade of red to match that of their stickers displayed on some of the STP oil can racks in filling stations. A touch of orange in Testor's #3 red would be close. If you must use a spray can, try the "Day-Glo" red sold in hardware stores. Just be sure to spray a coat of flat-white primer on

the model first. The "Day-Glo" paints are a bit thick for models, so some detail will be lost beneath the paint... The color will be so striking, though, that few will notice a few missing rivet details, etc.

## DISGUSTING DETAILS?

Apparently, many model kit companies feel it is necessary to include stock engine parts, like cast headers and suspension, in their kits. What is worse, the stock suspension is part of the chassis and cannot be made to look real. If enough other people agree, maybe we could get them to include the kind of racing parts we want instead.

Paul Crosby  
Baltimore, Md.

One of the main reasons for the simplified chassis, Paul, is to keep the kit cost down to the \$2 price range. Most kits include a choice of at least two engines, or wheels, or grilles, or other more easily seen parts of the model. If the model kits had everything, what would us custom lovers do for extra detail? It would really be no great task to adapt springs and other chassis parts from a funny car kit to a "stock" sedan for chassis detail. A number of the recent contest-winning models have just this kind of custom modification.

## IMPATIENT ENTRANT

I would like to know whether the photos of my contest entry car will be used in the magazine or not. I've been waiting at least four weeks without a reply from you.

Gerry Bridge  
Bronxville, N.Y.

We get several letters like yours each month, Gerry. We cannot advise any of our contest entrants just when OR IF their models will appear. Naturally, we notify the winners about the same time the magazine featuring their car appears. There is a delay, however, of at least two months between the time we receive any photos and the time they appear in the magazine—it takes that long to prepare and print a monthly magazine. Be patient, if you can, and if you don't see your model photo on our pages within three or four months after you send it in, assume it wasn't good enough and try again...

## 'CYCLE SOURCE?

I would like to obtain the address of any firm that can supply 1/32 or 1/24 scale motorcycles. You had photos of the Britains brand 1/32 scale Greeves and Triumph in the April issue, but where do you buy them?

Kevin Pugh  
Laurens, S.C.

Most large toy stores and some hobby stores carry the Britains line of 1/32 scale motorcycles. Auto World, 701 N. Keyser Ave., Scranton, Pa. 18508, can supply them on a mail order basis. You might also try the

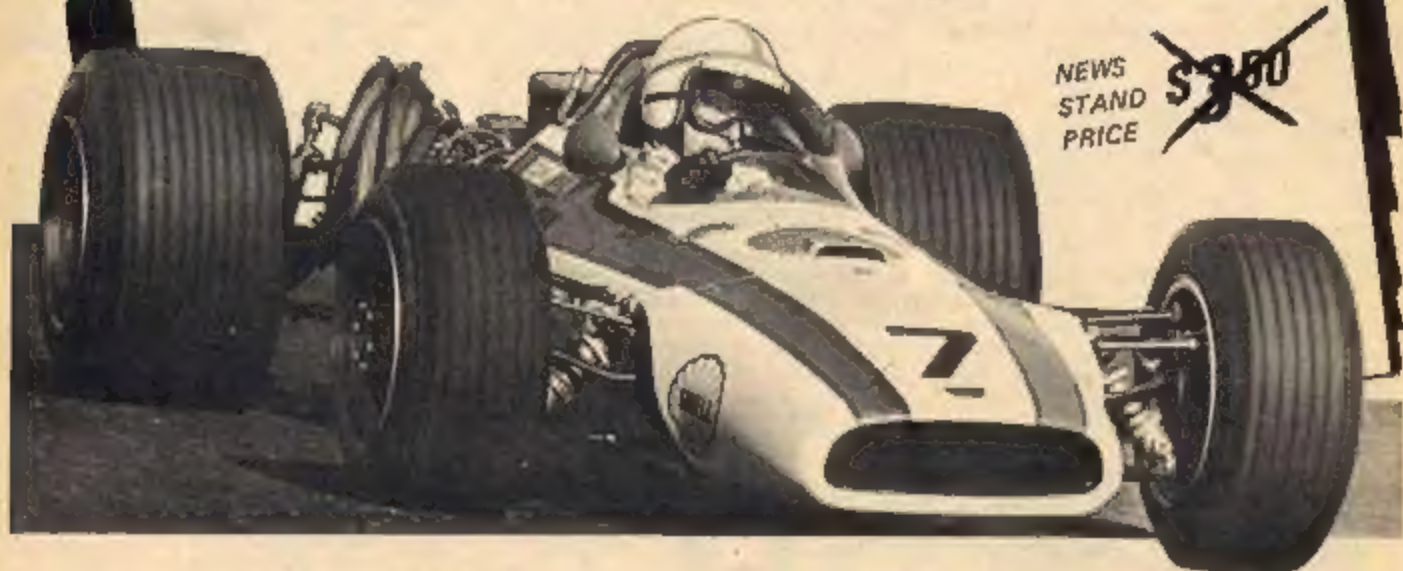


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## HO LAP COUNTERS

I am building a hand-routed HO scale track. I would like to find some way of making or buying an electric lap counter for it.

John L. Shipley  
Cincinnati, Ohio

The \$9.95 Aurora electric lap counter for two lanes can be adapted to any hand-routed track. The track tapes must be cut so they are electrically isolated from the rest of the track and wired only to the lap counter. Follow Aurora's wiring diagram with wires connected to the tape rather than the Aurora special track section. Open the bottom of this section to see which lane and tape each wire is to supply. You'll need one lap counter for every two lanes.

## TWIN-ENGINE REVIVAL

I would like to obtain chassis drawings to build a 1/24 scale slot car with two motors. Is it possible to buy a chassis already set up to accept two motors?

SP/5 Kenneth D. Jones  
A.P.O. New York, N.Y.

The current range of American made "super power" can motors have pretty well eliminated the need for more than one motor, Ken. The prob-

lem with a model car is much like a full-size dragster; a single high power motor can supply more power than current chassis or tires can handle. A second motor would only make the tires lose traction sooner as well as adding far too much weight. If you still want to try it, we'd suggest building a brass tube and rod chassis along the lines of the current angle motor anglewinders, substituting a second motor bracket for the front axle. The pre-formed motor/axle brackets like Dynamic's Cobra's or Associated's would do nicely. Your biggest chassis design problem will be in routing the drop pickup around the front motor...

## PURCHASING POWER

I am planning on opening an HO, 1/32 and 1/24 scale drag raceway. I would like to know what the best sources of power supplies for these three different tracks would be.

Jack R. Sandford, Jr.  
Portland, Texas

If local fire laws will permit it, and if you can keep them in a well-ventilated area, the automobile storage battery is the best power supply in all three scales. In the past, most of the 1/24 scale drag tracks offered the driver a choice of up to 36 volts of power from three 12 volt batteries wired in series. The center cells of the

batteries were wired to the terminals of a surplus heavy-duty rotary switch so the voltage could be selected in 2 volt increments from 12 up to 36. We'd prefer the simple 12 volt power, however. A battery charger from an auto accessory shop will convert the 115 volt A.C. household current to 12 volts D.C. to recharge the batteries. The charger should be disconnected whenever the track is in use.

## "TUNED TRUMPET" TIP

I've developed a method for making the flared intake bells used on the tops of the carburetors and injectors on both dragsters and road racing cars. Plumbing supply stores and some hardware stores carry small "flaring tools" used to flare the ends of copper or steel tubes in sinks. This tool has a jaw to grip the tube and a hard cone at the end of a threaded handle. To use it, you grip the tube in the jaw and screw down the cone. The end of the tube is then flared out just like the intake bells on real cars. The smaller flaring tools will work on tube down to about 3/32" diameter. After the tube end is flared, the tube is cut to length and epoxied on the top of the engine or carburetor. K&S brand aluminum tubing is the easiest to work with and it doesn't need paint.

John Reynolds  
Los Angeles, Calif.



# HO

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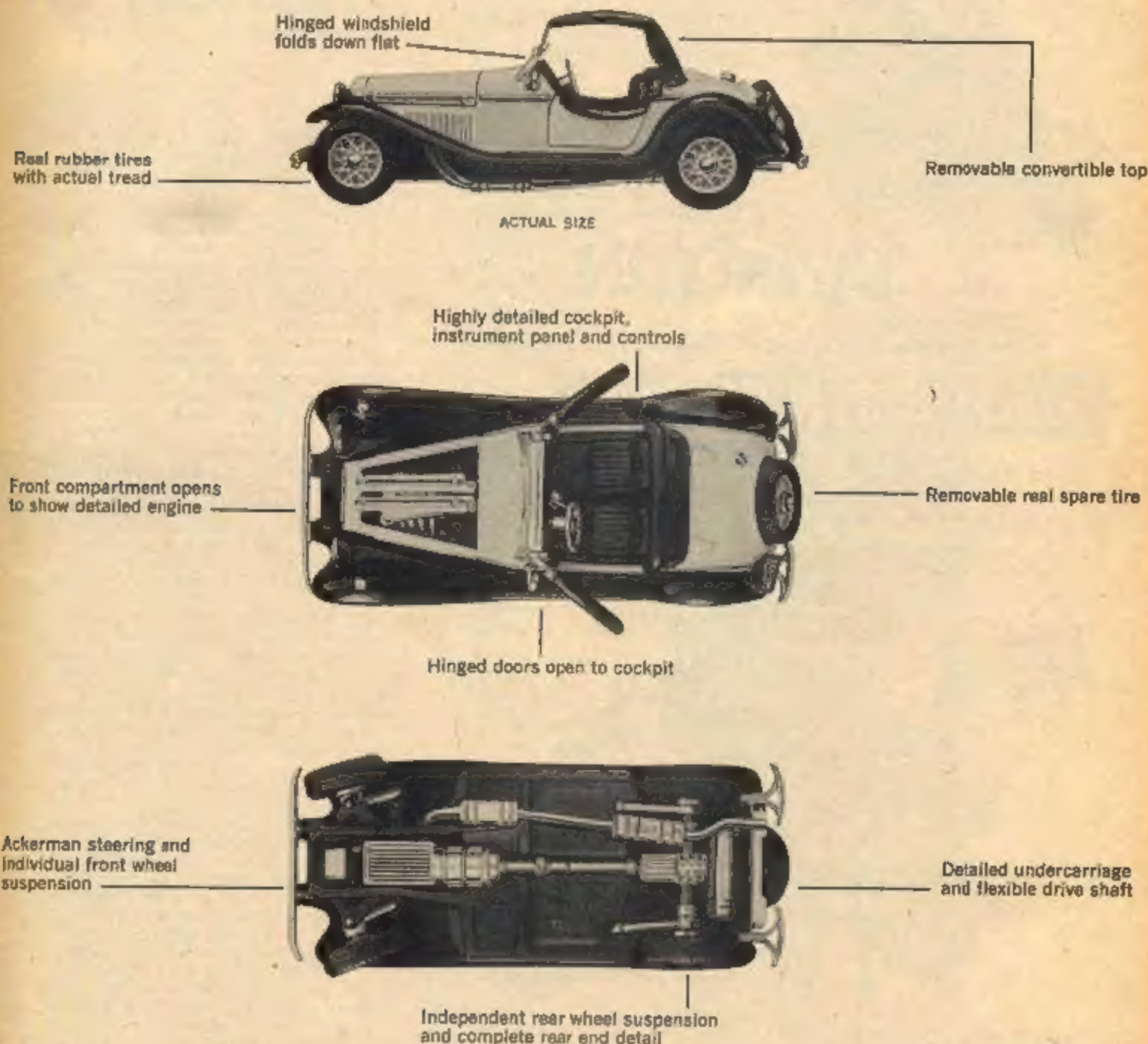
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# Inside Infor- mation

By Lynn Fletcher

If everything that was planned in Dallas (see U.S.R.A. NEWS) actually works, you're going to think its 1965 all over again!

Now that's a rash statement, but it only matches the decisions that were made and the policies which were laid out to govern the slot racing industry.

It took three days of solid thrashing, day and night, to work all the kinks out of some problems which took six years to come to a head. One of those days the air-conditioning coughed—that's almost fatal in Dallas—so the entire meeting, including members, tape recorder and arguments, was moved poolside so that we could continue. Most of the motel guests who were enjoying the pool must have thought we were just a little crazy sitting out there by the pool in a giant circle, yelling at each other, when we could have been cooling our tempers in the water. But time was short and lots of things had to be done.

The first half of the first day was taken up by making the N.C.C., an official organization, representing the entire slot racing industry, from the driver to the manufacturer. A board of directors was elected and once elected, vice presidents were selected to represent each phase of the industry.

As it is set up, the organization will be very effective, especially if you, as racers, will support it.

The main objective of the meeting was to help your local raceway owner. Naturally the reasoning being that if the dealer is making money from buying customers, the wholesaler is making money, the manufacturer is making money, the publishers are selling magazines and everyone is happy.

Well, in the past year a few shops have been making lots of money while many others have been closing their doors, unable to make ends meet.

The general opinion of those present at the meeting was that the high cost of merchandise, plus the large gap in racing between the beginner and the pro, were the main reasons that most dealers couldn't reach new customers.

New people are essential in any truly competitive sport and the pure fact that it is competitive makes a comprehensive racing program for all people an absolute necessity.

The plan emerged very early in the meeting—lay out a complete racing



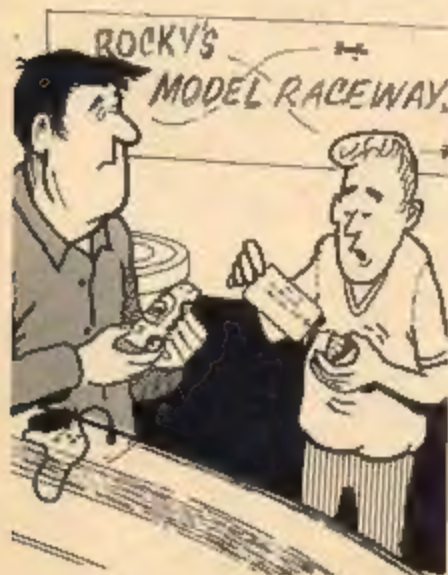
program from inexpensive, ready-to-run races, all the way up to "open" or "pro" races in gradual easy-to-take steps. Back this up with an organization that the dealer can depend on and look for help, when needed, plus an added boost from the manufacturers in the area of reduced costs on the right merchandise and controlled production and co-operative basis of kits and ready-to-runs. With all of this the dealer just has to make it or have a good reason why not.

Champion came well prepared to answer the problem of inexpensive racing. A few months earlier they had combined with Mura to produce a ready-to-race car called a Group 20 racer which is actually a \$24.95 ready-to-run car with a Champion Chassis and a Mura 27 gauge motor.

Their suggestion to the N.C.C. was that any manufacturer who desired to could buy their chassis at a controlled price and could also buy the Mura motor, also at a controlled price. This is the basis of Group 20. One type of chassis and one type of motor, all other parts are up to each different manufacturer to supply. But the retail price of a complete, ready-to-run Group 20 car must be \$24.95, no more, no less. In this way the customer buys the car by the quality of each manufacturer's accompanying parts. There are a few other ways to buy the car, such as kit form, less body and motor or less armature only, but all prices are set in these forms. Also, the motor comes with a plate epoxied between two of the armatures. Poles inscribed with the letters N.C.C. which makes it almost impossible to cheat.

It sounded good, but some of the

*Continued on page 65*



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10/Model Car Science

# USRA News

Now that the N.C.C. meeting is history, the L.A. USRA can settle down to the job of interpreting their role in the future of slot racing.

Some very large steps were taken to give the new driver a choice of ways that he can get in on the most exciting part of the sport—actual organized competition.

The biggest boost is aimed at the local shop owner and not at a race series which moves from shop to shop. The show owner, by following the N.C.C. guidelines, can once more build up a large group of local racers who will do most of their racing in his store, rather than traveling around, following a race series around the city.

This is not going to hurt series racing; quite the opposite. It's rather like a farm system, building up the racer's skills through controlled-cost racing until he gets to the point where he is able to compete in open racing successfully.

Now we have a decision to make. Should we add the new classes to our already successful series, or should we leave these new classes alone and let the local shop owners take advantage of them and build up that farm system?

We discussed this at our last meeting, and there were many arguments for and against.

Many felt that we had a larger problem to worry about. Our entries have increased to the point that a race day, which begins with signups at noon, doesn't end until 5:30 the next

morning! That's how it was at Speed & Sport on July 19th. We had 86 entries, and although things went very smoothly all the way through the program, the race ended much too late. Naturally, a lot of us felt that the addition of two or even one new class would make it impossible to run the race successfully.

On the other hand, some of the members said that to be a truly representative association, we had to give all people a chance to race with racers of fairly equal skill. By working the new classes into our schedule, we would be giving everyone a chance and living up to our purpose.

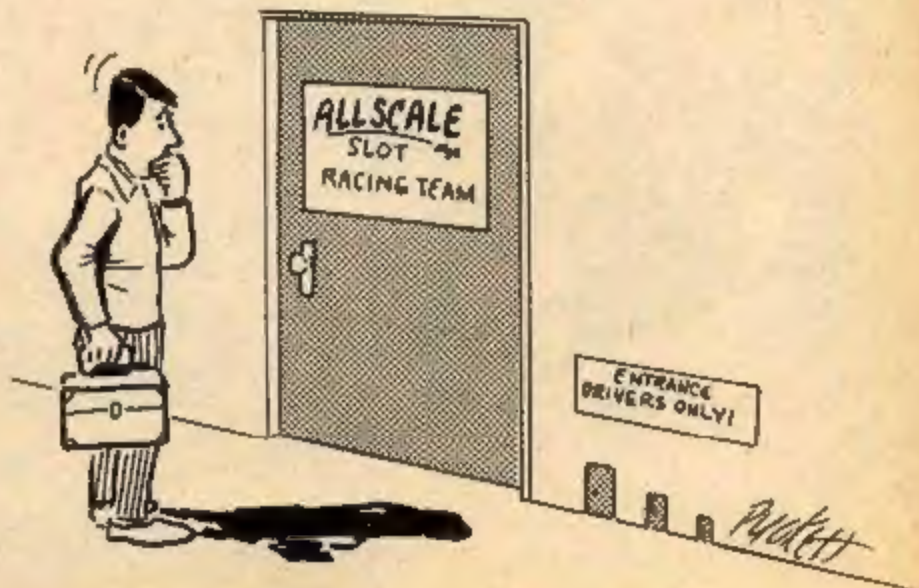
Now that's a very hard decision to make, with valid points on both sides of the question. And since it was such a hard decision to make, it was decided to take a little more time to study the problem and come up with an answer that would be fair to everyone.

One thing that we were very proud of was the fact that all of the rule changes which were suggested were adopted by the new competition committee. Also, one of our charter members, Mike Morrissey, was elected vice-president of that committee.

Since the USRA began with a new set of rules two years ago, we like to consider ourselves experts in that field. A little forethought and discussion can usually iron the wrinkles out of existing rules, plus come up with any new ones which might be needed in the near future. That's just what we did before the Dallas meeting, and the new rules are more comprehensive and self-explanatory than they have ever been before.

There were some changes made in Dallas which will directly affect the individual racer. First, practically all the pro-race series have been dropped by their different sponsors.

Some of the series which are al-





ready in progress will be continued until they run out, but after that there will be no more big races as we know them.

Naturally, the USRA series will not stop, but it will be expanded and publicized more from now on. And by January, it will be the *only* pro series left. Most of our members believe that this is an over reaction on the part of the race sponsors. Pro racing has done a great deal to bring slot racing out of the semi-toy stage and make it into a truly skilled sport.

Also, pro racing has brought the quality of merchandise up to a highly sophisticated point, so high that any junk whatsoever is just laughed at and doesn't make one cent. Of course the price has risen to a point that we all know is dangerous, but the new classes will now allow the racer to compete within his own budget. We don't feel it is necessary to cut out pro racing to serve the amateur. Almost the opposite is true. Thus removal of pro racing from the public eye can do slot racing a great deal of harm at a time when we are trying to build it up.

It doesn't take a high I.Q. to realize that what is really needed is a fully balanced race program which gives the amateur a chance to race and also gives him a pro to look to for advice, knowledge and the furthering of his own skills.

Another thing that will be noticeable by its absence is the tech sheet. *Car Model* and *Model Racing Journal* will not be publishing tech sheets in their publications any more. The reasons for this are: (1) that much of the merchandise that is listed in the sheets is not available through the shops, and so it hurts the dealers' sales; and (2) some of the entries are not completely honest in the listings of their cars and parts used.

This decision is a sad one, I think, because in many areas of the country, racers rely on the tech sheets to tell them just what their favorite pros are building and using. It's true that sometimes a racer will lie about the type of tires or some other part that he used in a race, but this type of thing is rare these days, and just isn't important enough to cancel tech sheets entirely.

The most valid reason is the first one, that you can't buy some of the items listed on the sheets at your local shop. It's probably hard on a dealer sometimes that he misses a motor or chassis sale because the builder cannot supply him for one reason or another, but if you look at it from the builder's point of view also, you would see a couple of valid reasons for that lack of supply. A couple of those custom chassis builders are only doing it part-time while they go to school or work to support themselves.

Expert builders, like Gilbert or Morrissey, do their building on a full-time basis, and therefore can produce the volume that is needed to allow them to sell to a dealer at a 40% discount. Some of these custom build-

ers only produce one or two motors, or chassis, each week and can't afford to sell for less than their advertised price. Now, if the volume is so low, then the dealer just can't possibly be losing much money at all. But now, if you win a race with "so & so's" chassis, no one will ever read about it.

I've been told by Mike Morrissey that it is *Model Racing Journal's* new policy that if you are a custom builder, and do not sell to retail shops, they will not even accept an ad for their paper!

Well, it sounds like an over-reaction to me. But then I don't have to run a newspaper, and Mike's experience should tell him enough to make the right decisions. Besides, he is the new vice-president of the Competition Committee and can take advantage of all the information he will receive regularly. I'm sure things will work out right eventually especially if we have to wait and see what develops. If you feel strongly about what is going on, write to me and let me know what you think. I'm sure Mike would appreciate hearing from you, too.

Beginning with the last race, we've had to make a couple of changes in our trophy and merchandise policy for the amateur races. While all the manufacturers were together in Dallas, they decided that the giving away of merchandise for race prizes was a bad policy, and all involved agreed mutually to end the giveaway and let the N.C.C. RACE PRIZE PACKAGE take care of the amateur race awards.

In listening to their reasons, I must say that they had a couple of very good arguments against this giveaway. Since we relied upon the donations for our races, we were faced with an immediate problem as to what to give our amateurs for prizes.

Since some of the custom builders were not involved in the manufacturer's policy-making decision, we did get some very nice equipment from them for prizes. To this we added \$100, in the form of merchandise certificates to be redeemed at retail value in merchandise bought at the shop where the race is held. Their certificates also allow the dealer to make his 40% profit which means \$40.00 to the dealer. It worked very well and most racers seem to be happy with it, although we had to drop the trophies in order to break even after the race.

Since U.S.R.A. races are self-supporting, we just cannot go in debt at any race. All money collected in entry fees must be divided up to the satisfaction of the racers.

The USRA is made up entirely of racers, and so if things don't go like the racers like them, then the majority vote can change them. The system works very well.

We have a new chapter forming in the Salt Lake Area. But as of this writing I don't have the information needed on who will be organizing it.

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ter outside of Los Angeles is the Northwest Area U.S.R.A., based in Seattle, Washington. Some of the fellows came down to our last race, and I sure hope they enjoyed themselves. Congratulations Guys! You've really done a nice job. Sometime in the near future I'd like to have an article from the USKA up there to let our readers know how things are and how you've made your group a success.

It's not my job to report on races from other areas that are not run by the USRA—Ray has other writers to handle that—but I'd like to thank all the L. A. Area drivers who covered the 1400 miles to go to Dallas and make the good showing that they did. I want to especially thank all those amateurs from Los Angeles. I didn't get over to the track until Wednesday night, but when I walked in, all I saw was L. A. amateurs. It looked like an L. A. CHAMPIONSHIP RACE!

Well, that's about it for now. If you've got questions about the things I've covered in this column, drop me a line. I'll answer you as soon as possible. Until next month, GOOD RACING

## EASTERN VIEWPOINT

The scale racing car "nut" has his NAMRA to help him to "do his thing." The super-fast, ultra-low "Jet-Set" have their Championship Rules and now, a National Competition Committee, and everyone is in their own camp, not throwing rocks and happier than ever, right?

The leading manufacturers in slot racing have put their respective heads together and at long last come up with a formula for some low-cost racing equipment and racing programs. The fact that this should have been done long ago is obvious. That the people now involved are all to blame is not true, nor fair. Half of them were not even on the scene when the big money was being spent. The ones who didn't stay to help hold up the sky when it started falling have all gone back to making toy sail boats or what ever it was they were doing before they got on the slot racing bandwagon. I think in the long run we're all better off without them.

So there you have it, the commercial racing scene is happy, things are looking better and just everyone is about to start that up hill trip again. But you know, I don't see too many happy faces, at least in this part of the country.

Here, something has happened. Those of you who bother to check the masthead of this magazine and see who I am probably think, "... There he goes again, the prophet of doom." No way baby, just ain't so. I'll grant

you, my only pass to the scene is as a spectator, at least where the commercial racing scene is. Other than this, my only credentials are probably the oldest slot racer still twitching. But I'll tell you this, you don't have to be on the inside to see and hear the mumbling going on by some top pro drivers who have come close to packing it in. Something is wrong, the feeling just isn't the same. Some, most actually that I've talked with, have complained of that feeling of "win or die" contaminating the air. Most of them blame the money races, the ever increasing amounts of top prize money in particular. The sport just seems to have gone out of it for a lot of them, and it's become like hard work.

There's more talk too, and from the other side of the counter. The big money races just aren't getting the results that those who put it up expected, and so, now you hear that maybe the big money races are over. Fine, this should stop all the bad feelings and help bring things back to level. But there's one more element that no one yet seems to have a solution for. Well, almost no one.

The boys who are walking around shaking their heads are complaining about too little activity, and remember, I'm talking commercial, and I'm talking on this side of the sandbox. I think they're right. There does seem to be too little organized racing here except for the big name events, and there seems, from my little pile, to be very little real organization.

All this low-key talk going around has been heard by others, and despite what other writers tell you, when the majority of pros start doing things like boycotting a big event then, you know something's up.

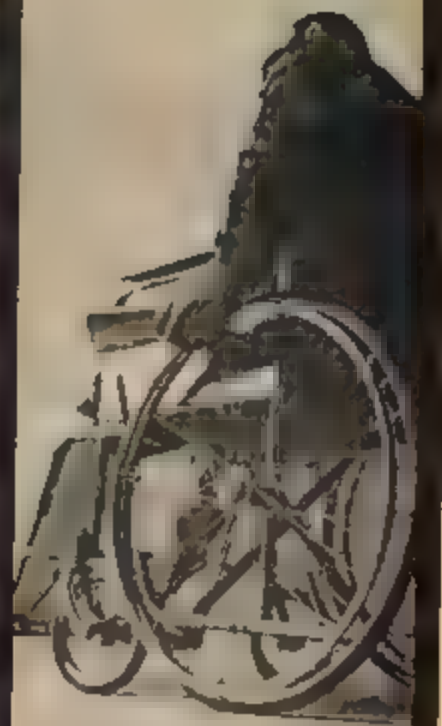
That's what I find happening here, I think it can be, and had better be, corrected, and fast, or there's going to be a lot of slightly-used equipment for sale, and a few more vacant shops for rent.

You people with the reins had better stop patting yourselves on the back about how bright you were to have come up with these sport-saving-committees, and stuff, and get to work. If it leaves the scene here, you'll never bring it back. And losing it here will be felt right across the country and in your respective pockets.

For what it's worth, the situation outlined above is so obvious to anyone who wants to admit it's there, that one very well known and well organized group is now, as I write this, meeting to see what they can offer these disillusioned enthusiasts. And if my information is right, they'll pull it off. Underline this, it will not be an action motivated by any reason other than to keep the sport alive.

As yet, I don't quite understand how it will work, or for that matter why they even feel it necessary to help a group that races entirely different than they do, but one thing is sure, they will not change their ideals, rules

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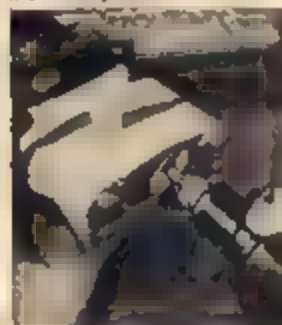
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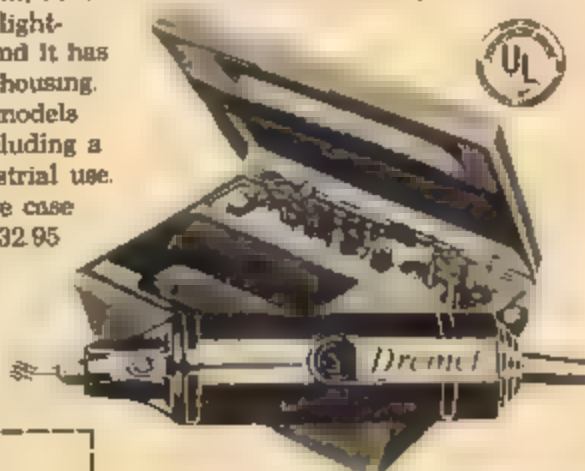
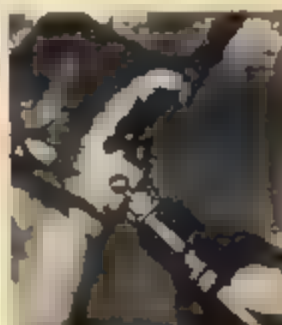
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or direction. They will, I'm told, come up with a new division, formula or whatever they call it, and they are better prepared today to do it than any other organization I can think of.

Disregard all of this if you choose, but, if you are an Eastern racer, I suggest you follow this column for at least another month when I have more definite information. This is no put-on, you pros are about to be offered an alternative, and one that may well appeal to you.

A more pleasant note is one of increased activity by enthusiast shop owners, again a regional thing, who are becoming more and more aware of the necessity of quality custom equipment and are doing something about it—like going out and making it and selling it to us. Sure cuts a lot of red tape and junk goods, when the guy who makes it knows how it should be. Shake your head, and then go to Tag Powell's Mini-Wheels Raceway, or Mike Tango's Nutley Raceway, Cobra or Phase III. Even Glen Oaks has something in the cookie barrel that's theirs.

More designing, building and experimenting are done in this part of the country than anywhere else, and it shows in the equipment, both in the showcase and on the track. Fortunately, this magazine lets you hear about it, if only from me. What would they do with two of us?

Last year, according to figures that were given me by NAMRA, a count of its membership both in 1/24 and 1/32 showed the biggest concentration of activity and people here in the East. HOCCI, NAMRA's H.O. affiliate, indicated the same thing. I don't know why, bucks maybe, but the ball is here and it had better be carried and talked up—or "goodby."

I think this Group 20 is a good thing, still too high in my opinion, but it's a step. If it ever gets to where it should be to really pull that youngster and "new blood" type in, and hook him, then maybe it had better go the 15 or 10 route. The important thing is—support slot racing. Any way, any time, all the time, and it doesn't really matter what scale you run, or what group you run in, or organization you belong to.

There's never been anything like it, there never will be again. If you think the balsa stringers and tissue paper is the way to go, then fine, but hand this magazine to some kid who wants to race miniature cars; you have no business reading it.

I think we have already passed through the lowest point slot racing ever reached. And now I honestly believe we, all of us, are affected in one way or another, and are at the cross roads. You'd better make up your mind just which way you're going, and how do you want your sport to go, not at the next meeting, not next month, not tomorrow, **now RIGHT NOW**. It's kind of hard to get up in the morning and pull on your pants if you're dead.

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# SMALL STUFF

Address correspondence to: Bill Von Staden, 77 Sherman Avenue, Jersey City, N.J. 07307

This is it, gang, the big news you've been waiting to hear. The Champion stuff has arrived on the HO scene! They have set-screw front and rear wheel/tire sets, special pickups, special copper brushes, a commutator (maybe not yet available), and best of all, HO ARCO magnets. I have had a chance to work with the stuff, and here's what I've got to say.

First I'll give you the specifications of each item. The wheel/tire sets for the rear consist of an axle, two tires bonded on aluminum hubs, and two set-screws to fit in those hubs. The tires are silicone, about 3/16" wide. Nothing new here, you say? Get ready, total tire diameter is 1 1/8"! That's equal to the size of a stock tire. The axle is smooth at each end and splined in the center to hold the crown gear tight. The size of the set-screws has to be seen to be believed. They are small! The overall width of this setup works out to 1/2" which is wide yet legal under most rules. The front-end set gets the same axle and hubs, but molded on to those hubs are thin hard tires. Again, small diameter is the word, and the overall width of the setup comes to 1/4". Don't you get the feeling Champion planned it this way?

The commutator brushes are of reportedly high graphite content, making them very hard. They look a lot like stock brushes for the most part, until you put them in your car. But, then I'm getting ahead of myself.

Now for the confusing part: the pickups. They look a lot like stock ones, except for being flatter. That is, they don't have as pronounced a bend in them where the pickup touches the track as a stock one does. They look like they will work. Many things have confused me, but this has got to be near the top of my list—they don't fit my car! For some strange reason, they are about 1/32" too short. I guess this is a pre-production sample, and I am sure Champion will remedy this by the time you read this. The idea about the pickup being flatter is that you can use different diameter tires without affecting the pickup's ability to function.

OK, so that's what the Champion stuff looks like, but as you know, that's not all we're interested in. The tires, as I said, are silicone, so you know they bite. This, coupled with their small diameter, makes cornering painless. But can you guess the by-product of a small tire? Yep, they lower the effective gear ratio something fierce. This, in turn, lowers your car's top speed something fierce. Take

the road test. The scene was my test track, a twisty circuit on a 4x8 board. The track is small, main straight length checks out to only six and a half feet. The car was an Aurora Lola. It was powered by a stock arm, and was tried with both stock and hop-up gear ratios. (Don't laugh at the stock armature, with my track it's all you need.) Fred Rabinowitz drove the car; it's his. With both ratios, the car was peaked out well before the end of the short straight. It cornered well, and Red said that he liked the tires, and that maybe with some changes made on the car everything would be OK. What changes? Maybe substituting a fourteen tooth armature pinion gear for the twelve tooth hop-up-driven pinion gear, (don't forget to alter the crown gear to match), adding a rewind for more top-end punch, and adjusting tension on the brushes for more top speed. Could these tires make the brass pan obsolete? Maybe on the short tracks it could; it lowers the c.g. by a lot. But, on the big tracks I think the pain will remain.

On to the brushes. The scene was a commercial track here in the Jersey City area. It has a main straight of fifteen feet in length, and each lane has its own Aurora powerpack. The car was again a Lola, this one owned by John Faber. Goodies included a LaGanke armature, AJs tires all around, a brass pan, shimmed stock magnets and hop-gears. John ran a few laps after tuning it up; then we put in the Champion brushes. There was a noticeable increase in speed according to both onlookers and the driver.

Now the magnets. I hope you're sitting down. The scene is the same as above. The car is now a Camaro owned by Frank Tafaro. It had an Aurora rewind, hop-up gears, shimmed stock magnets (before the test), AJs tires all around, and a heavy brass pan. The car was really flying when we pulled it off the track to install the ARCO magnets. With the magnets in, Frank got on it. To the amazement of everyone, it got the front tires up!

The idea of all this was not only to test Champion's new HO products, but also to get more than just one person's opinion. In the case of the magnets and the brushes, everyone was very enthusiastic over their performance. Some people were disappointed at the way the tires performed, but I choose to think that our cars just weren't ready for the tires. After we adjust for their small diameter, I'll form a solid opinion. By the way, the front tires were good, but they were too wide for the Lola. They'd look great on something like Lancer's clear plastic Ferrari F4, where inboard mounted tires look weird. As for the pickups, I hope I'll be able to put in a good word as soon as things are straightened out. But as far as I'm concerned, Champion would still be ahead if nothing but ARCOs were any good, 'cause they were UN-REAL! In closing on the Champion stuff, I would like to take time to thank Fred, John, and Frank, who

allowed their cars to be used as test beds for the new goodies.

Well there's more news than month. AJs is offering a large decal for authorized dealers of their products to display in their window. The decal is similar to the ones that will be enclosed in each package of tires, except for being much larger, of course.

While we're on the subject of tires, there's a real war going on between manufacturers to see who can come up with the best grabber. We all know Twinn-K (AJs) is now on top. But Champion has arrived on the scene, and they aren't exactly known for taking a back seat to anyone. Then there's always LaGanke, who are offering 1/4" wide sponge tires. (Yes, you read right, one quarter of an inch.) And we have the independents like Richard Harrison of Hobby House with his 1/4" (yes, again) wide silicone "Car-Am" tires. So the scene is really opening up, and I'm not about to guess who'll be on top come the cold weather.

I mentioned last time that the Aurora cars produced in Hong Kong seem to be faster than their American counterparts. As of this writing, I am not certain. I've seen some that fly, but my new Cheetah does not. I'm going to reserve judgement until I can road test it (and drag test it) against my American Torino. The "H.K." cars even look different. The arm is wound with gold wire; I'm not sure if it's the same size. The magnets are what I call "Mark II" Auroras. They are easily identifiable in that the top of the rear one is painted white. Axles seem to be copper. The big giveaway is the open-hole rivets in the chassis. Even if somebody removes the sticker saying "Hong Kong" in bold type, you know by the rivets what it is.

Body weights. For those of you who remember when I said that the latest Aurora cars were being produced with thin bodies, here's how they check out. stock 500XL Ford- 4.0 grams, stock Torino- 3.5 grams, stock Cheetah- 2.3 grams. All were weighed with both screws removed from the body, and windows and bumpers left in. Another light one is the VW, but mine was modified before I had a chance to weigh it.

Late breakers. Mura is in HO with a new type of pan and a three dollar rewind. Aurora said to be organizing some sort of an HO club. Tyco is on the rise (addition of Pat Dennis to their staff makes me say that). A concours for the "World's Most Beautiful HO Car" is being held on October 11, 1969. Further details can be obtained from Rick Eastwood (Gendale Racing Assn., 3120 Christopher Lane, Indianapolis, Ind. 46224. Anyone in the Dallas Texas area who is interested can contact Greg Pomeroy, 3535 Flaxley, Dallas, Texas. Sounds like they have a going organization.

OK guys, that's it for this month. Don't give your thumb a break until you sit down to read this column next month. See you then.





# BUILD OUR COVER CAR

Dynamic's great new 1/32 scale ready-to-run chassis, and an English Alfa Romeo Tipo 33 roadster body makes a great combination if you like racing at home!

The highpoint of the current state-of-the-art in model car chassis engineering incorporates rather complex chassis hinges and close-fit motor/tire fitting. The combination of an angle-mounted motor, a drop pickup arm and hinged body/chassis side members is difficult to build from hand-cut pieces of brass and steel. Tolerances and clearances are close in a 1/24 scale chassis. In 1/32 scale, such a chassis is a real challenge to the model builder.

A few months ago, it was thought impossible that such a design could ever be mass-produced. Dynamic did it, though, and with success. The newest Dynamic 1/32 scale ready-to-run chassis has ALL of these "ultimate" design features and they all function effectively. With a bit of "tuning," like the addition of a bit of lead weight here and there, a proper tire additive, and some light lubrication of the working joints, Dynamic's latest should perform as well as any hand-made 1/32 scale "anglewinder" chassis.

The entire chassis is brass with quality oilite bearings for both axles, a quick-change pickup, hard front tires and closed-cell foam rear tires, special anglewinder gears and a home set-tuned Mabuchi motor. No production car in the history of home set racing

has had as many performance features! At \$9.95, with a choice of Ford GT, Porsche, Ferrari, or McLaren body (pre-painted with decals and driver/interior), the Dynamic 1/32 scale ready-to-run cars are an excellent buy for the guy who wants the latest but can't take the time to do it himself.

To the home set driver/builder who is interested in scale-size cars, the new Dynamic ready-to-run chassis presents one drawback in its lack of any adjustment for the wheelbase. The stock chassis is set at about a scale 96" wheelbase (three inches actual measurement). A number of the new full-size racing cars have wheelbase dimensions of 90" to 92". We were able to make a simple cut-and-resolder

modification to the chassis that can be set to any of these shorter wheelbase lengths. The rearward shift of weight that results from this "chopping" also seems to make the chassis handle home set corners at even higher speeds.

The body selected for this particular car is the product of one of England's finest clear plastic body suppliers, Taylormade. At present, there is no American source of supply on these bodies. You can order this Alfa Romeo Tipo 33 Coupe direct from England and receive it within about two weeks if you enclose an International Money Order for \$2.00 to cover the cost of the body and postage. Specify that it be packed in a hard cardboard box, too. Order from H. Taylor and Son (Brockley) Ltd., 390 Brockley Rd., London, S.E.4, England. The quality of the clear plastic and detail is comparable to most American-made products, but you must trim the bottom edges and the wheel cutouts.

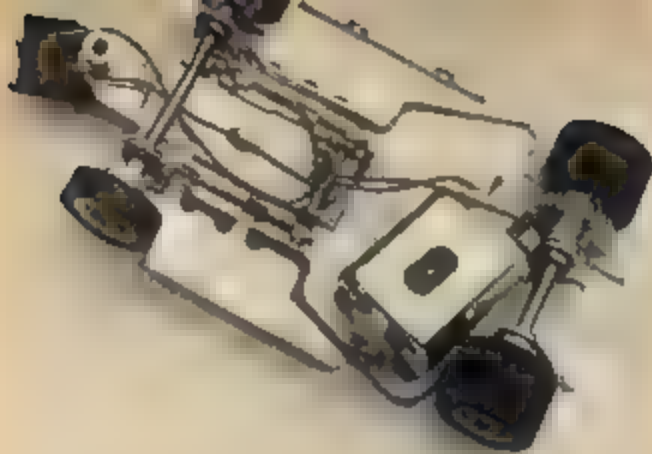
The Taylormade Alfa Tipo 33 shows the careful and painstaking efforts of its builder, Michael Cerone. Michael actually races this beauty in club events at the giant MESAC track in Inglewood, California. The model features fully trimmed louvers and scoops, a full vacuum-formed interior and engine detail visible through the rear window. A full-size car with identical numbers, red paint, yellow fender flash, and blue/white racing stripes competed at the BOAC 500 race in England earlier this year.

It's this kind of detail that makes 1/32 scale home and club racing so realistic and appealing. Models like Michael's Alfa are more miniature race cars than slot racing "sleds."



Dynamic's newest 1/32 scale ready-to-run car has more high performance features than any car yet in the home set scale. Ford GT Mk. IV, Porsche 908, Ferrari 612, or this McLaren Mk. 8 bodies are offered, pre-painted, with decals and driver included in \$9.95 tag.





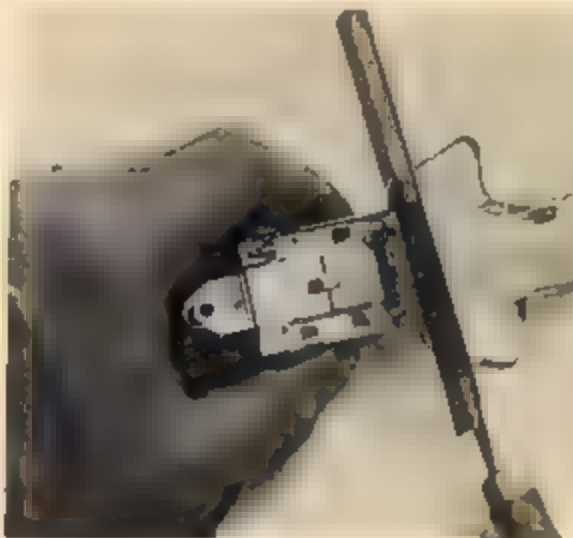
Chassis features anglewinder motor mount with special gears, foam rear tires and hard fronts on set-screw wheels, "batpan" hinged body mounting panels, drop pickup arm with quick-change guide, and oilite bearings at all four corners.



Stock chassis is set at a 1/32 scale 96" wheelbase. To fit English Taylormade Alfa Romeo Tipo 33 body, with its 90" wheelbase, the chassis must be shortened 1/8". Begin by removing all wheels, axles.



"Batpan" hinge pins on each side of chassis can be removed, to remove 'pans, by prying up the front retaining tabs on each side.



Chassis is cut exactly parallel to rear axle at just the place shown here. File off any burrs left from saw cut.

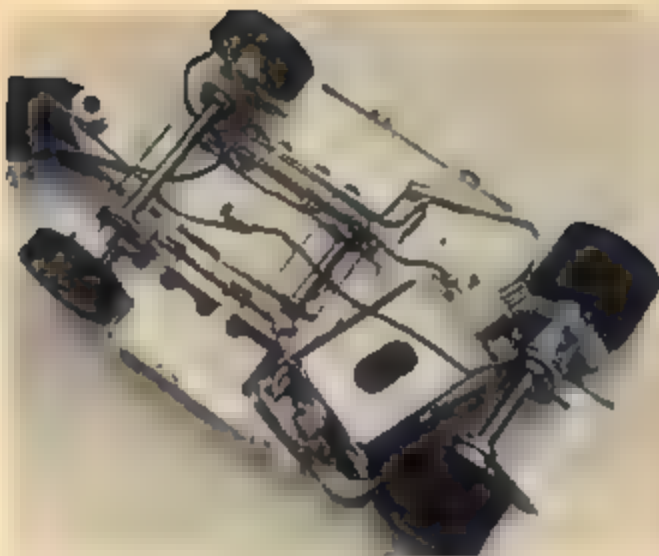


Cut halves of chassis are overlapped to give exactly a 2-13/16" wheelbase, then soldered together at point of overlap.



Insert bearings, then axle to align them, and solder all four bearings to sides of chassis to keep bearings from rotating.





Four wheels, tires and gear are installed and clearances adjusted to complete chassis shortening mode.



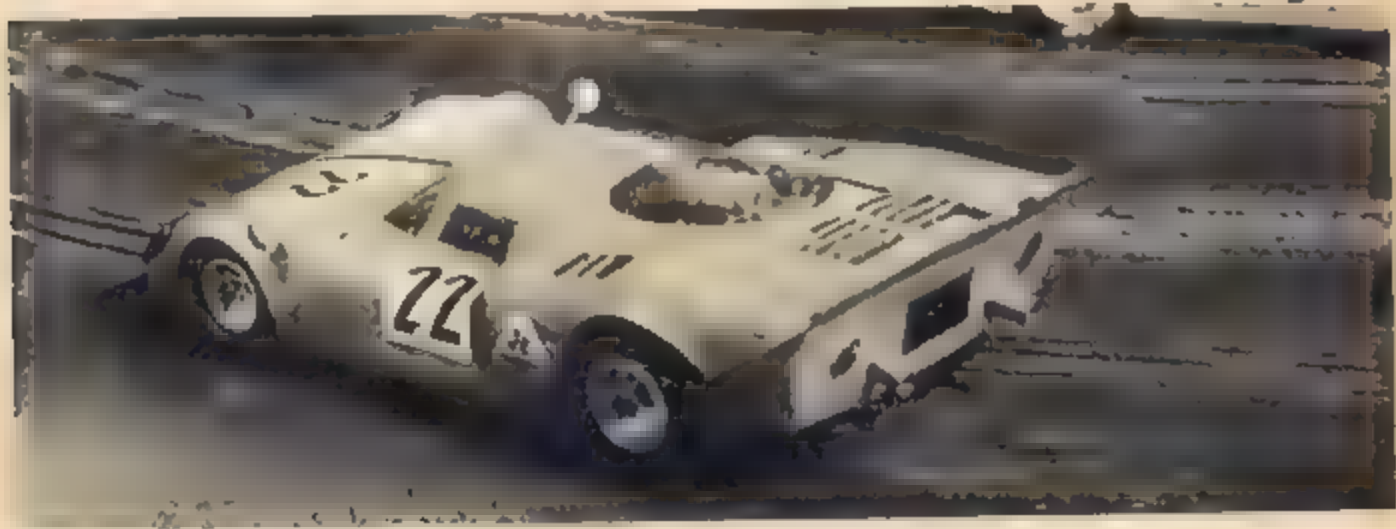
Fender cutouts on unpainted body were trimmed a bit undersize, heated over a match flame, then flared out as shown.



Openings between each louver were cut out with a sharp hobby knife for a super-detailed touch. Intakes are flared tube.



MESAC club-member Michael Cerone painted and decaled his Alfa Tipo 33 to match real car that ran at '69 BOAC English race.



Builder Cerone epoxied on separate spoiler, diaplanes, rear view mirrors and gas caps. Car is raced on MESAC club track shown here.



# SPEEDY

by PUCKETT





# NAMRA World



No race to report this month, but you can look for two next month. The reason? Just plain tons of mail, thanks to the response of our latest NAMRA advertisements in this magazine. We knew you were all out there. Now we know where you are, and we're certainly glad to have you aboard as members.

Before going any further this month we should like to make the following statement passed on to us by NAMRA's Membership Committee. Please, those of you who are joining NAMRA for the first time, and have elected to come in on the new NAMRA Formula program intended for home club groups, this membership is intended primarily for groups that qualify as a racing club. We cannot possibly list you as a club nor can we send you club material such as score sheets, concourse sheets, stickers and trophies for your annual awards, if you do not sign up all of your members and send us their names and dues. We have already received quite a few individual memberships requesting the above material. In this case, we can do nothing but notify you of your error and list you as an individual member. Please, read the advertisement carefully.

As I write this, NAMRA's Eastern members are preparing for a hectic two months of racing that will wrap up the official 1969 season. With three 1/24 events, two of them back-to-back a week apart, and one 1/32 event scheduled, everyone is preparing new cars in the hope of upping his point standing and perhaps taking home some hardware.

The interest in the 1/24 events has obviously stirred up enough interest with some of the Eastern "Jet-Set," most of them old and long-time NAMRA members, that I hear some of them are actually building NAMRA-

type cars to compete with. I wonder what they'll do for one-inch tires now, after going with the super-small for so long. In any case, the event they seem most interested in will be on a track familiar to both their kind of racing, and ours. The outcome should be very interesting indeed. And personally, I hope one of them cops top honors; it might just remove some doubt from their minds that NAMRA cars can go as well as show.

We hear from one of the country's foremost chassis builders, East Coast, that, in preparing chassis for several of the Jet-Set entries, his biggest problem seems to be where to find the room to fit all that chassis between the tires. In any case, it should come as a refreshing idea to them that at last they can exceed the three inch overall tire dimension they are accustomed to, simply by building a wider scale car.

Here's a happy note for you NAMRA members who would rather buy pre-mounted rubber than stick your own on. We have recently noticed that CONRA is still making available mounted tires in one inch diameters. So no excuse now.

As I mentioned earlier, with all the membership mail coming in, we have all been kept quite busy. The new NAMRA Formula for home clubs has added to this, and now, though not yet confirmed even for my ears, there is talk of yet another Formula that is aimed right at the heart of this thing called "Pro-Racing." We know you have all read of the manufacturer's dream of Group 20, a low-cost racing program, with perhaps Group 15 and 10 to come. The name I hear being mentioned in NAMRA Land is Group VII, and that has nothing to do with cost. I repeat, Group VII is NAMRA's, and has nothing whatsoever to do with low cost racing. I'm told to look for a no-holds-barred type of competition racing program directed to, and by, the all-out race enthusiast. More on this next month. I hope, the whole story.

NAMRA's Rules Committee has already received several letters and calls regarding the new Can-Am car, the AVS Shadow recently featured in *Road & Track*. The obvious reason, of course, the small-size tires. We here also read R&T rather religiously, and saw the article and the specs. The tires are small to say the least, in fact they not only are smaller than anything NAMRA allows, but are probably smaller than anything allowed by any other organization, and that includes such groups as U.S.R.A., with their 3/4" front tires.

Well, the Rules Committee has given this thought and the present NAMRA rules book must be the guide. And that guide states: Page 11, Car Specifications, Article 1, B. Body design. 1. The car body design must be a replica of a full-size car which has been built for racing, and which has actually run

So now, with six cars under construction, it's obvious that someone will attempt to run the Shadow. It will take only one win line or draw to open the flood gate and allow a model of this car to enter in NAMRA competition. And if that happens, the car will be allowed to run with fantastically small scale tires. So the 1" minimum tire size that NAMRA has for so long defended, and rightly so, will, at least in the case of the Shadow, be a thing of the past. But remember, it will only apply to the shadow until someone else comes up with a car with equally small tire sizes, and runs it. We'll wait and see. One thing we're sure of, regardless of the state of chassis construction, someone like Dynamic will probably have a shadow body shell out by the time you read this. The mind boggles at the thought of this car in 1/32 scale!

A little more on tire sizes. I recently returned from the Can-Am event held at Watkins Glen and with tape measure in hand went from car to car. Sorry fellas, still nothing under 24 inches in diameter, front or rear on the big-bore stuff. But Lord, are they getting wide! Eyeballing the Surtees-driven McLaren/Chaparral body panels propped against a wall in the tech building, it was obvious that the overall configuration of the body is definitely "Coke" bottle. There's plenty of room being allowed for yet wider rubber. Widest found at point of contact 17". And we wonder as do the people at Goodyear, just how the hell shafts take it.

A muted cheer went up from one group of NAMRA racer/builders with the banning of wings on the 1:1 cars, at least in everything but Can-Am and FA racing. These are the same guys who complied with the rules by building wings on their models when necessary and to develop the mountings to a break away type so that they would not be bothered with such things after tech and the first practice sessions. I guess they'll still be at it with the Can-Am replicas, but at least we won't have to go through it all with the open wheel stuff anymore. It was getting embarrassing, and rather intricate.

For my own money, I think they should all be burned in hell, along with fifty gallon oil drum markers, (the wings, that is) and let us all get on with the building of road cars. I've had it with the super-fast Chitty-Chitty Bang Bang things. If you don't agree, you have never had your car marshalled by some clod who thought the wing was a handle. Besides, and I think most of the pro-racers will agree by now they just never did work, and I have my doubts about their value in the real thing too, but I'll leave that point for the British model magazines to hash out.

A little short this month, but have to get a couple of cars built, like quick.



# QUESTION SESSION

By Brick Price

Each month MCS will answer questions of general interest. Address all queries to Question Session, C/O Brick Price, 11795 Gateway Blvd., #3, Los Angeles, California 90064. Only those questions with a self addressed stamped envelope can be answered personally, time permitting.

**Q** I am interested in entering your contest, but don't know much about it. Would you please fill me in?

Gregg Zahora  
Westmont, Illinois

**A** The contest is a monthly feature of MCS. Because of the time required to put together and print the magazine, you may not see your model in print for as long as three months.

The very best size of photograph is a 5x7 glossy print, although a regular-sized photo is also good if the car is very clear and takes up most of the picture. Photos taken with the Polaroid Swinger are much too small, and seem to be fuzzy.

Try to keep your background uncluttered. Avoid "cute" backdrops with a lot of detail. Three different views of the model will help us to judge your car more easily.

**Q** After reading an article in the February '69 edition of MCS about the V-8 Drag Bike, I tried, in vain, to obtain some of the "Chrome Silver" paint which it recommends for painting the rear wheel extension. I wonder if it would be possible for you to supply me with the name and address of someone who could supply me with this paint.

H Foster  
Northumberland, England

**A** The Chrome Silver paint we mentioned is made by Duro and is available through Auto World or most model shops. When ordering it, ask for Duro Plastic Plating Enamel, Stock #PE 103. It dries with a brilliant aluminum finish which MUST be protected with an overspray of clear enamel. Rub-N-Buff is another kicky and fantastic product for simulating chrome or polished aluminum. It is applied in a paste on any surface and buffed to its brilliance with a soft rag.

**Q** I just bought IMC's Touch-Tone Terror and I would like to know what class it should run in. Also, where can I find some 1/25 scale Crower decals without buying a whole model, since I'm running short of the green stuff.

Kim McCool  
Chula Vista, California

**A** It would be impossible for me to classify your truck without knowing what speed equipment you'll be using, weight, engine displacement, etc. The best thing to do is get a copy of the AHRA (American Hot Rod Association) rule book and build it to fit a specific class.

Russkit's No. 7110 decal sheet has the decals you need and it'll only cost you 29 copper ones.

**Q** I would like to have some help on channeling. I am new at this sort of thing, but would like to learn more about it. I would greatly appreciate any information you could give me.

Frank Sgro  
Erie, Penna.

**A** Your question is a good one and a little too involved for this column, Frank. Next month we'll show you how to channel AMT's new '32 Ford Phaeton. The Phaeton will be a workshop project devoted to readers and their suggestions.

**Q** I'm interested in collecting "MATCHBOX" cars. Are there any clubs devoted to this?

John Hompstead  
Long Island, NY

**A** You bet, John! At last count there were approximately 50,000 collectors in the U.S. Collectors, or would-be collectors, contact me for more info.

**Q** I have some questions for you geniuses. First, do you have an April, 1967 issue of MCS? If so, what is the price?

Second, how would you make a panel wagon out of a car like the Mustang Mach I or the Corvette Stingray. Third, what does the interior of a panel wagon look like? I'm planning to build a '69 'Vette panel wagon. Also, how do you upholster interiors, especially bucket seats? Thanks for any help you can give me.

Anthony Joseph  
St. Albans, New York, 11412

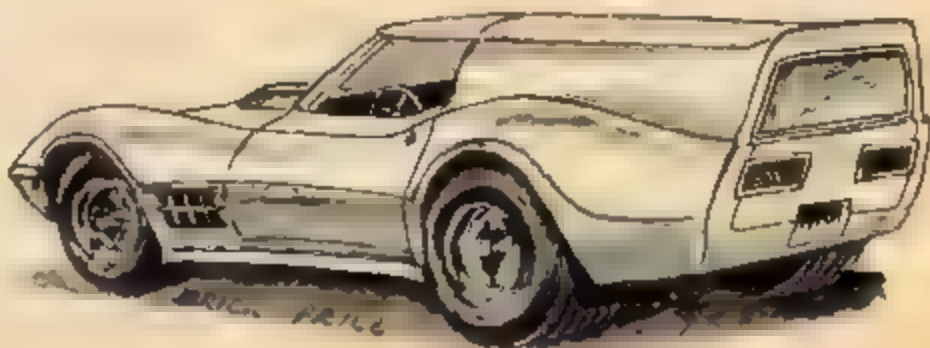
**A** Back issues are available from MCS for \$.50 each. The address is:

Back Issues Dept.,  
Model Car Science,  
131 No. Barrington Pl.,  
Los Angeles, California,  
90049

Your idea for a Corvette panel sounds great! GM had an experimental Corvette wagon in 1953 called the Nomad. It should be easy to duplicate this illustration using the following items: AMT's '69 Corvette kit, .050" sheet styrene and AMT body putty for the side panels, Camaro taillights, air vents from AMT's Mercedes, hood scoop from AMT's Impala. Leave the rear bumpers off and fill the holes with putty. Glue the front bumper (less grille) in place and paint it to match the car in the same manner as Pontiac's rubber bumper.

The interior of panel trucks are very plain, with wall bracing exposed, since they are usually utility vehicles. Panels used as show cars are plush inside, somewhat resembling padded cells with upholstery on the walls and roof.

I've found that paper toweling applied to seats with liquid glue best resembles naugahyde. For leather upholstery, shell out four clams for a good quality chamolite and glue pieces of it to the seats with Pliobond glue. It'll sure shake up the judges when they smell that interior!





# HOME TRACK TERRORS

Revell adds four potential home set slot cars to the home racer's "Trans-Am" collection with these one dollar snap-together kits.

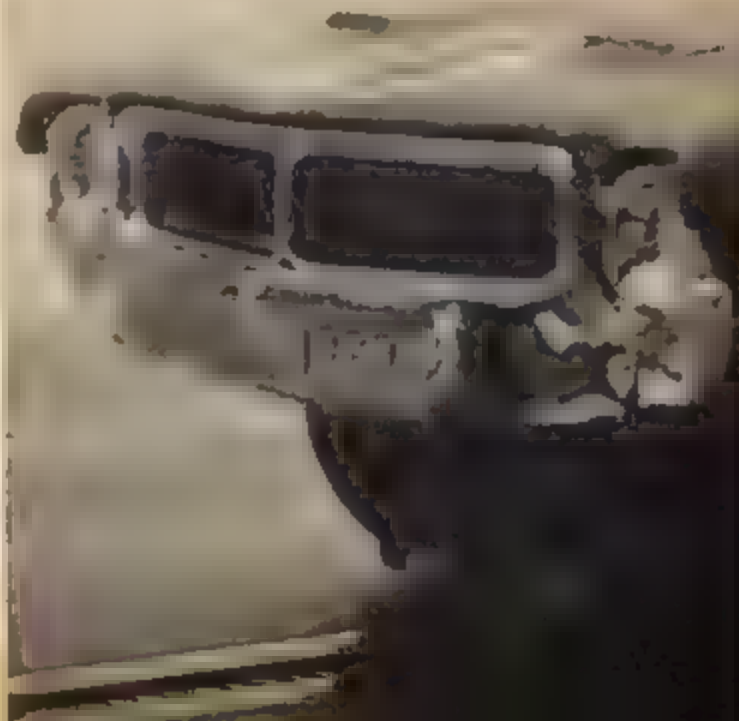
The major movement in full-size racing circles is toward competition events for the "pony" cars like Mustang, Camaro, etc. With their latest quartet, Revell allows the informed home racer to build a complete field of cars patterned after the latest in racing machinery. The Sports Car Club of America stages its Trans-Am series of races for the pony cars on the best road racing courses, while NASCAR sanctions similar events on paved oval tracks in their Grand Touring class.

Revell introduced 1/32 scale \$1 static kits and \$6 ready-to-run versions of the Mustang, Camaro, Cougar and Firebird about a year ago. Now, Revell is offering \$1 static kits for the remaining brands of Pony cars—American Motors' Javelin and Plymouth's Barracuda. Both will adapt easily to the Revell home set chassis, used in the earlier four cars, following the steps outlined in these photos.

For those interested in miniatures of more sporty cars, consider the remaining pair of new Revell cars, the AMX and Stingray. These two have shorter wheelbases that would force the builder of a slot version to shorten the standard Revell Pony car home set chassis' wheelbase. Either the AMX or Stingray could be quickly fitted to the Chassis Revell uses beneath their home set Ferrari GTO and earlier Stingray. In fact, these four new Revell \$1 kits can be fitted to any brand of 1/32 scale home set chassis using the same method of adapting the stock home set car interior to fit the newer body.

The Revell Javelin, in particular, can make a most colorful miniature of the real Trans-Am and Nascar GT racers if the wild red, white and blue paint scheme is duplicated. The Javelin we selected as a prototype for the paint, number and sponsor decals on our model is a historical racing vehicle in its own right. The full-size Javelin with these same markings marked the first entry by American Motors into racing at the early-1968 Sebring 12 Hour event. The highest placed car in this first AMC race finished twelfth overall with Peter Revson and S. Scott driving.

1/32 scale Javelin, painted to match the first AMC '68 Sebring cars, is ready to do battle with Mustangs, Camaros, Firebirds or Cougars on any home set track.



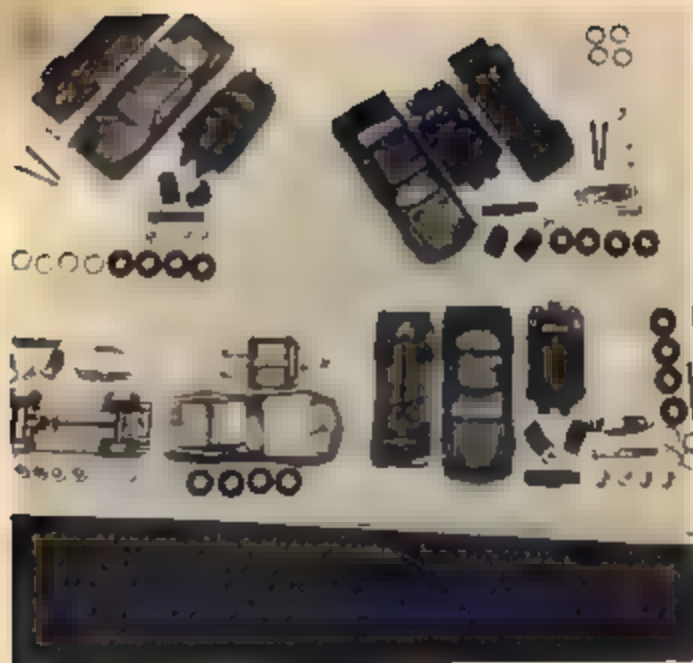




Four all-new 1/32 scale display model kits from Revell. Javelin, AMX, Barracuda, or '68 Stingray kits are \$1. Bodies adapt easily to home set racers.







Red, white and blue American Motors' racing colors are a natural for the Revell Javelin or AMX. Spray entire body blue, let dry, then mask off rear of car.



The entire front area of the car is then sprayed white and masking tape and paper removed from over blue tail section. Note the exact location of color separation.



White and blue areas are masked off after white has dried, and the front area sprayed red. 1/64" blue striping tape is placed next to red area, red tape next to blue area.



The molded-in assembly pegs must be trimmed from inside the body to fit body over the stock Revell home set car chassis. Kit's windows and bumpers are glued on next.



While we adapted this Javelin to fit a slot racing chassis, the same racing paint and decal idea could be used on the basic \$1 static chassis from kit.



All four of Revell's new 1/32 scale cars are accurately proportioned. Any of them could be adapted to a slot racer. Stock kit is a simple snap-together assembly job.



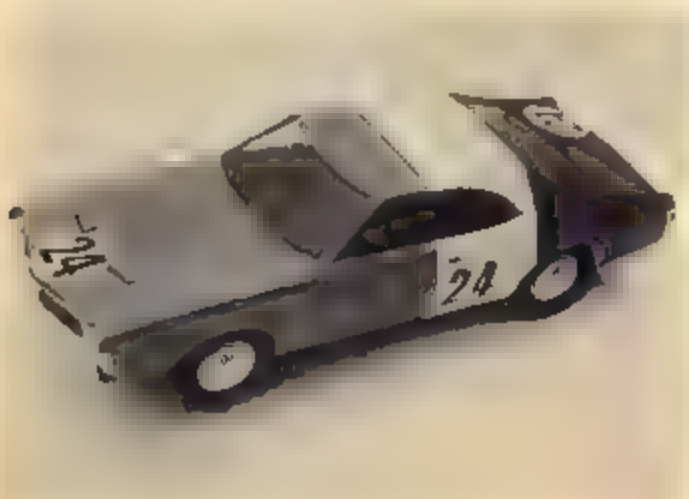
Revell's existing \$6 ready-to-run 1/32 scale Mustang, Camaro, Firebird or Cougar, will fit either the new \$1 Javelin or Barracuda bodies.



To adapt the Revell slot car chassis to the Javelin, the interior from the slot car body must be pried off of its press-fit mounting pegs to be used in new body.



Interior from Revell slot-racing Mustang is placed inside the Javelin body. Use either contact cement or epoxy to keep interior in place for racing.



Slot-racing Mustang interior is replaced on chassis with original mounting screws. Check fit of body/interior on chassis before contact cement or epoxy dries.





# The Home Layout of the Month

Enter this new contest for 1/32 and 1/24 scale home tracks and win a one year subscription to MCS!



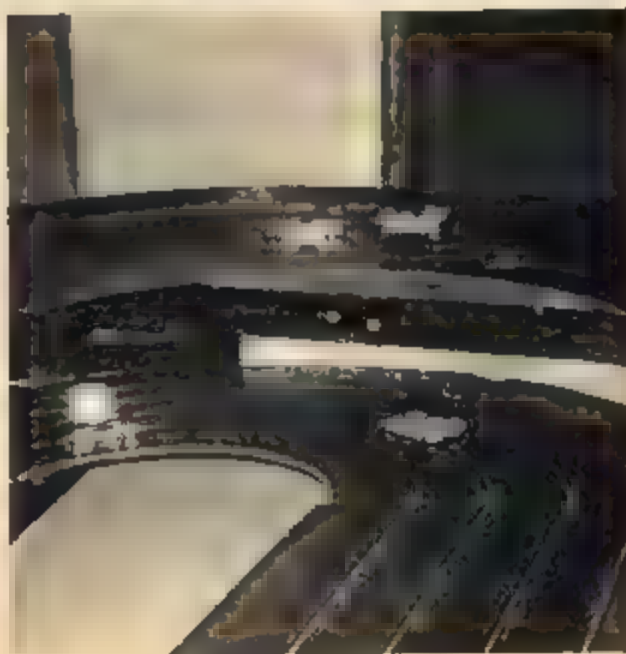
This month's winner of the one year subscription to *Model Car Science* for the Home Layout of the Month, is Mr. Clemmie Marshall, 2760 Jefferson St., Gary, Indiana, 46407. Clemmie's 144' per lap four-lane beauty took him two months to build and takes up one entire side of his

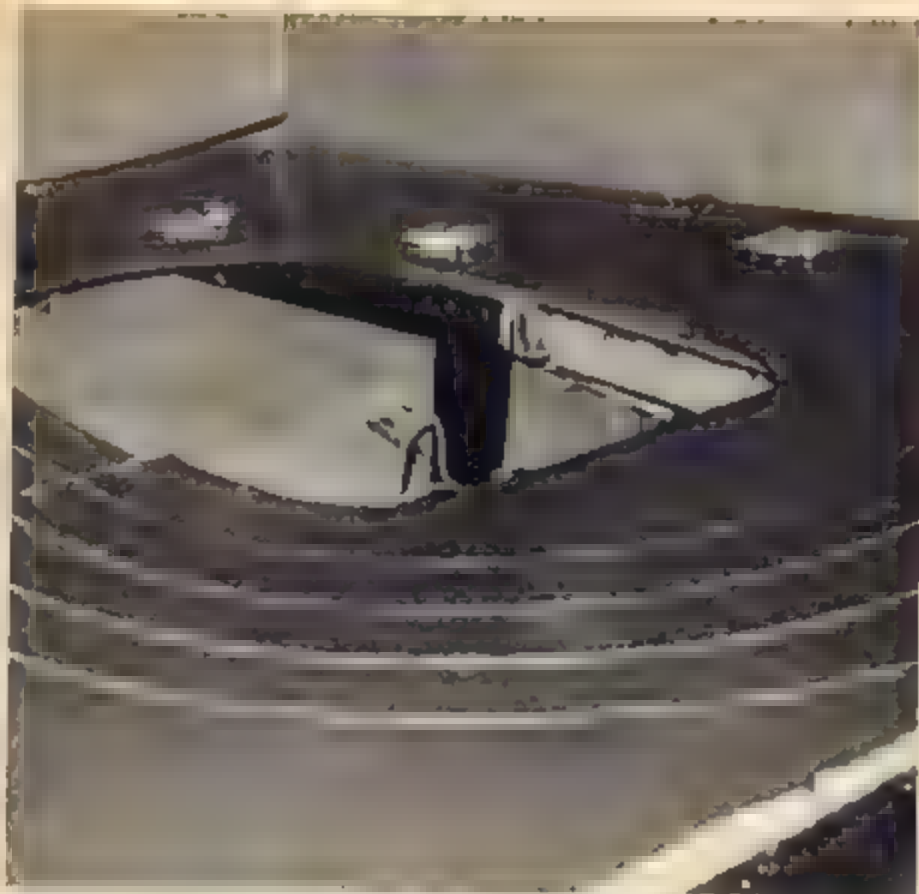
The surface of the track is made out of particle board, and it is resting on a series of 2' x 8' tables. The two straight-a-ways are 33' each, which are the upper and lower decks. Reverse switches and four 12 volt batteries handle the electrical end of things, along with a lap counter which was built from an old pin ball machine.

Very nice, indeed, Clemmie. You'll be receiving your subscription to MCS in approximately 60 days.

You can win this contest too! Take a good, clear black and white photo (or two) of your home track (this contest is for 1/32 and 1/24 cars only, if you want to enter an HO track, enter through "Small Stuff," elsewhere in this issue) and send it to The Contest Editor, Dept. H, *Model Car Science* 131 Barrington Place Los Angeles, California 90049. He'll pick the winning layout each month.

Get with it, and good luck!







# Model of the Month

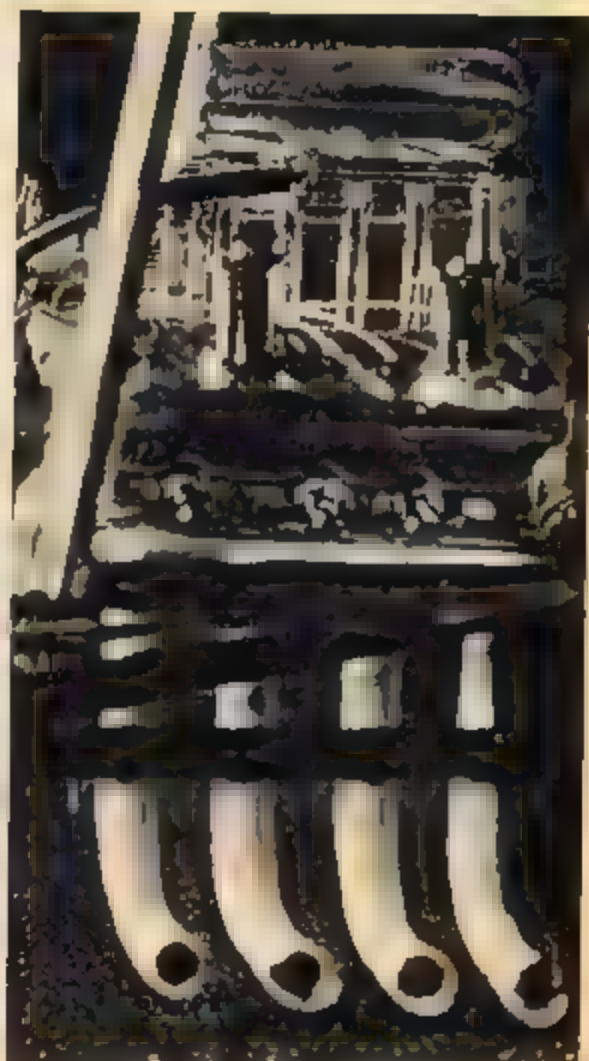
## HOW TO ENTER OUR CONTEST

You can win a \$25 Savings Bond if you win first place in our contest! Simply send a sharp black and white photo (no color, please) of your favorite model car, along with a description of what you've done to it. Be specific when mentioning the parts you used, as other readers are interested. Send your photo and description to, "Brck" Price, Contest Editor, 11785 Gateway Blvd., # 3, Los Angeles 64, California 90064. Sorry, no prizes for other than first place, except the pride you'll feel when you see your car in the pages of MCS



David D. Sorenson, of 1736 Columbia Rd. NW, Washington, DC, is this month's winner of the \$25.00 savings bond. It was hard to decide which was more outstanding, the photos or the model. Dave does all of his photography and processing. The name "Half-Breed" is apt for this one-of-a-kind funny car. The body is MPC's '69 GTO with wind wings removed and spoilers added. The Logghe frame was pirated from MPC's "Super-Hemi," kit as was the engine. The B-M Hydro, front end, and bucket seats are Cougar "Rattler" items. The slicks were made by sectioning two Goodyear slicks to a scale 16" width. Parts from several other kits were used for detail work. Color coat is five coats of competition orange. Congratulations, Dave!









Attention to finish and excellent photography enhance what are basically standard kits built by Lance Rogers of Battle Creek, Michigan. The Charger is detailed with spark plug wires, brakelines, and fuel lines. The interior is scratch built. It is finished in metalflake yellow and grey. The "Haulin' Hearse" should make enough noise with its two 427 hemi's to raise the dead. Color is ghoulish gold and grave-stone white.



UP, up, and away! A funny Javelin sheds its skin to expose the nicely detailed chassis built by Luc Chartrand of Longueuil, Quebec, Canada. Detailing includes a chute release, brake lines, ignition wiring and a set of wired gauges. A modified Chrysler engine and Goodyear slicks provide the push. The color is a gold base coat covered with four coats of Mysterion Yellow. Good work, Luc!



Bruce Ballard of St. Maran, Iowa, built this high and mighty looking Cyclone. Parts from four different kits went into its making, including the frame and rear axle from AMT's "Aa Kart." Aside from the beautiful engine detail, Bruce included working clutch and brake pedals, a hinged hood, doors and trunk.





Monogram's "Big T" has always been one of our favorite kits. Steve Schwartz, of Aurora, Ill., did very well in customizing his, using parts from several other Monogram kits. Bucket seats were substituted for the seat normally in the big rod. The steering wheel, moon foot pedal, rod bar and seat belts are from the "Big Drag." Chains were substituted for the usual windshield braces. The trunk was made from an old cigar box. "T" Riffic, Steve!



"Unsafe at any speed" ain't necessarily so with Ken Beagle's Denver, Colo based funny Corvair. The body is AMT's '67 Corvair. A twin supercharged hemi is from AMT's 53 Stude kit, "Mr Speed." The chassis is AMT's Pantha frame, shortened 3/16". The interior is fashioned from card stock and painted silver. Sitting in front of that Hemi could be a hair raising experience!





By "Brick" Price

# BUILD AN HO. WINNER

Here's how to build the Car of Your Dreams. We'll start with "Phase One" and progress right on up to an "all gone" racing machine that will be the ultimate wailer.

## PHASE ONE

When the slot car boom was at its peak, HO scale cars were neglected and all but forgotten. Commercial tracks appeared around the country and flourished for short periods of time, but they were dedicated mostly to 1/24 scale. Soon the races started getting super competitive and the cost soared to the verge of ridiculous. The average guy, interested in racing for the fun of it, dropped out. Commercial tracks went broke and the sport declined for lack of participants.

The thrill of racing, competition and fun, however, lingered on. The sport went underground in the form of clubs devoted to HO and 1/32 scales. The club tracks differ considerably from the commercial tracks in that they usually include scenery, and the atmosphere is more congenial.

The advantages of HO scale are obvious. The total cost of building a winning car can be held to \$7.00 or even less. The scenery is plentiful from railroad hobby shops and the racing track can be incorporated into an existing train layout. Best of all, an HO layout can be built in 1/3 the space required for 1/24 scale.

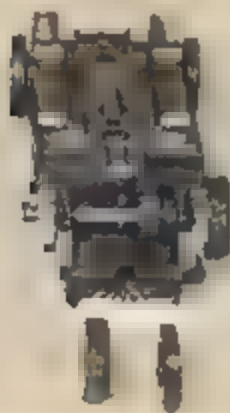
What was once famine for the HO enthusiast is now a feast. La Ganke, Mura, Champion and Aurora are a few of the big names involved in HO speed equipment manufacture. In the following months, we'll show you how to build highly-detailed, fast, and inexpensive cars, plus several detailed articles on trackside buildings and complete



Aurora's neat little Firebird with the T-Jet motor is the basis for our step-by-step hop-up article.



A small screwdriver is all that is needed to remove the chassis from the body.



One of the simplest and most effective (not to mention cheapest) of all the performance items is the installation of A.J.'s "Golden Falcon" silicone slicks. Just pull the stock tires off of the rear wheels and press the slicks on. This photo shows the difference in width between a stock tire and A.J.'s.



Pry the spring clip off of the motor with a screwdriver.



Carefully pull the gear plate assembly and armature from the frame. Take care that you don't drop the magnets or brushes (pellet shaped objects in lower right hand corner of the picture).



Cut an old tin or aluminum can into strips  $3/16"$  x  $11/16"$ . These will be used as magnet spacers.





Press as many strips behind the magnet as needed to keep the magnet from rattling and space it in closer to the armature. This step helps to keep the car running smoother, quieter, and cooler, with improved acceleration and braking.



Use a sharp-pointed object to gently press the brush springs further into their holes. This will increase the pressure of the brushes against the commutator. Soft springing on the brushes causes arcing, pitting, skipping, and, as a result, loss in power.

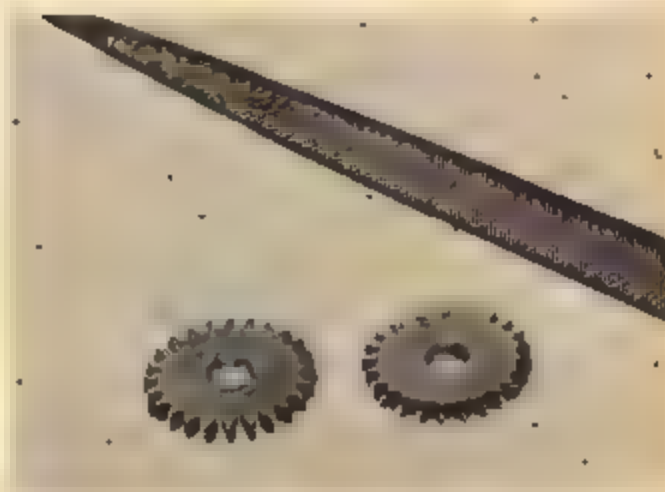


Use a soft eraser to clean and polish the commutator.

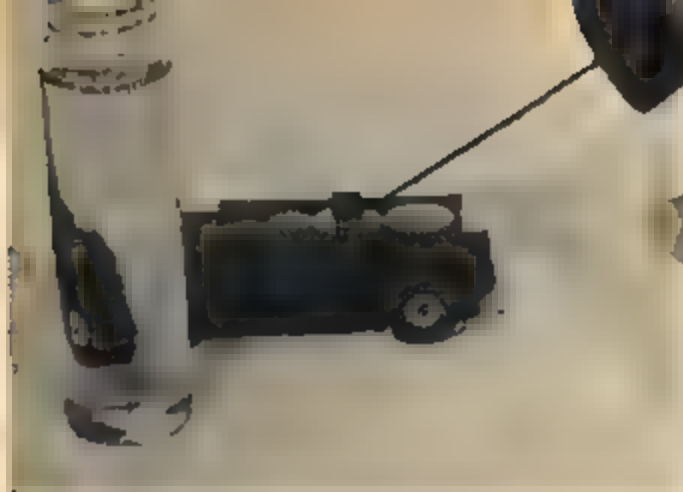


Use emery paper or crocus cloth to remove pits and clean the brushes. Use a swedish file or knife to carve a notch, similar to a screwdriver, on the bottom of each brush. This will prevent the brushes from rotating and wearing irregularly.

34/Model Car Science



Friction is the biggest enemy of total-performance cars. One way to combat friction is to decrease the size of the area in contact. Filing the idler gear to approximately  $\frac{1}{4}$  its original width will produce a significant increase in speed, acceleration and a cooler-running motor.



Re-assemble the motor by reversing the procedures outlined before. Place the brushes in their holes with the slots facing down. You needn't worry about positioning the springs as the brushes are now self-aligning. Slip the gear plate assembly in place and replace the re-worked idler gear. Snap the spring clip in place to hold the chassis together. Apply ONE drop of oil to the idler gear and armature shafts.



Trim the ridges of the gear plate assembly flush with its base, except in the area of the spring clip. This will allow you to lower the body more than normal.



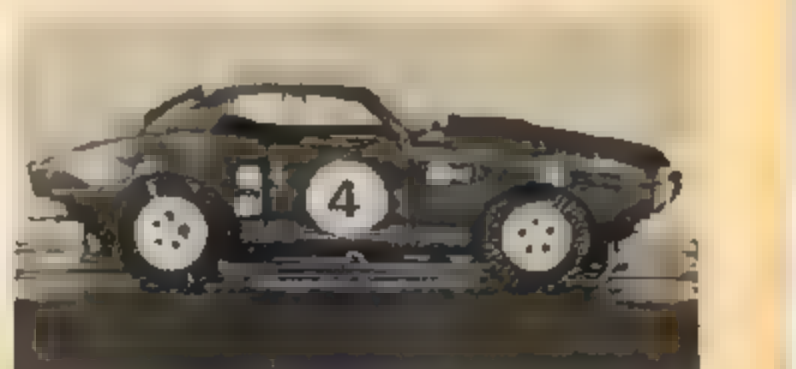
Trim the body mounting posts a little at a time until the body just rests on the gear plate.



Radius the wheel wells enough to clear the tires when the body is secured to the frame.



Keeping the center of gravity low is important to the handling of your car. Most printing shops have scraps of lead which can be cut-up and glued to the chassis with Plombond.



Auto World's HO sponsor decals and LaGanke's Mag Wheel inserts were used to make the car look as fast as it is.

Well, that does it for the "Phase One" version of the Firebird. All of the modifications listed were intended to keep the cost low while vastly improving the performance of the car. Next month we'll really get rolling toward the "Total Performance" HO scale machine of your dreams with "Phase Two."



## The latest in model building tips

One of the most difficult things to duplicate for modelers is the opened drag chute. There are three ways of doing this—have opened, deflated cloth chutes spread out on the ground, buy Monogram's T'rantula with its opened plastic chute and put it on your model; make a cloth chute, fasten it to your car and set a fan in front of the car.

The deflated chute doesn't look too good, and the chute is not really open. The fan idea should also be rejected because, while the open chute will look realistic, the car won't, as the fan blows the chute off the table, trailed by your favorite model car! Monogram's T'rantula dragster seems the only answer. The only trouble is, with its molded plastic chute, all the models you have will have the exact same drag chute.

**Solution!** Make your own plastic chutes, each different from the other. With this article, you can make just about any size, shape and color drag chute you have in mind.

Construction is easy and cheap. The plastic used for the drag chute is available from Auto World. This is clear celluloid plastic usually used for custom car windshields. It is about .020 inches thick. The thicker your plastic, the longer it will take to heat and melt. Do not use anything thinner (food plastic wrap, etc.). This will literally dissolve in the oven and won't hold its shape like celluloid. The

plastic has to be flexible but stiff. Oven temperatures and times are approximate. You will have to keep a watch on the plastic at all times when it is being heated. Too much heat will ruin the plastic and too little will not form it.

For chute patterns and colors, just about anything can be used. Look in different car magazines for detail

# HOW TO BUILD DRAG CHUTES

When setting up a scene with the drag chutes, don't forget a driver in the car, since there usually is one present when the chute is open. Other small but important details are the open chute pack, and the pulled-out chute ring and wire. The good thing about the plastic is that when the material melts, "folds" form as in the wind-whipped cloth of real drag chutes.



Here are the basic materials needed. The size of the bowl depends on the size of the chute you want to make. The music wire is 1/64" and the plastic is .020" or thicker.



The first step is to cover the bowl with aluminum foil to prevent the plastic from sticking. This is your mold. Since most bowls are flat-bottomed to prevent rolling, a little foil added here will make the bowl more hemispherical.



Now the plastic is cut in a circle about three inches larger than you want your chute to be. Then in a pre-heated oven of about 450 degrees, place the plastic on top of the up-turned bowl and leave it in for about 15 minutes. Keep watching it as long as it's in the oven.



Here is the plastic after it was heated. It will cloud up after being heated. The longer you leave it in the oven, the lower it will drop down. Keep watching it when heating, or you may have melted plastic in a puddle in your



After the plastic cools, cut it to shape. Then with striping tape, tape on a pattern of some sort to represent seams on the chute. Make sure the plastic is clean or the tape will not stay on.



Paint the chute. Any pattern or color can be used. Orange and white are used commonly. Don't forget to paint the inside in the same pattern. You can now see the folds that formed as the heated plastic dropped over the sides of the bowl.

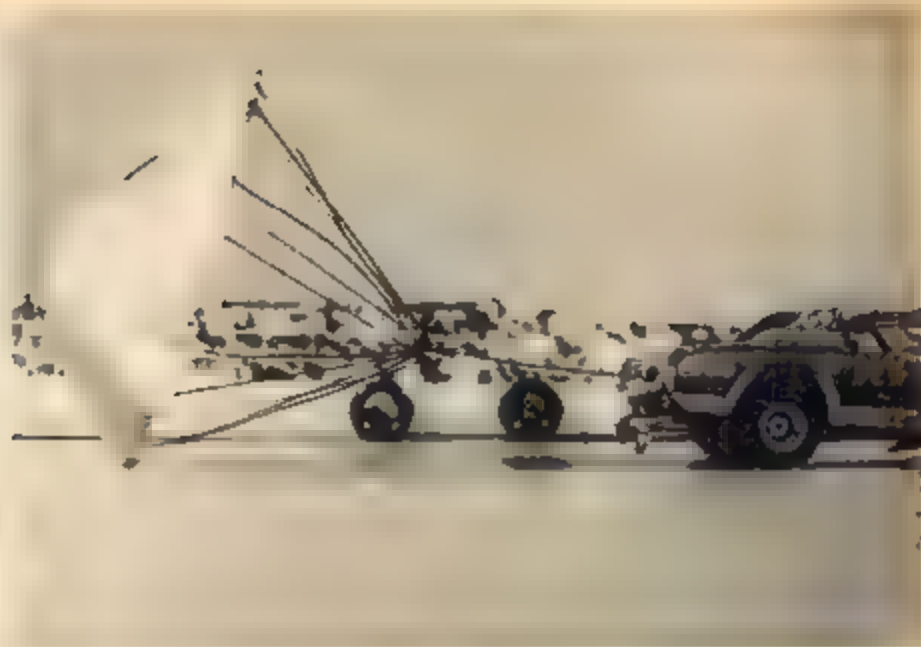


With music wire, form three "vees" and attach to the chute with epoxy. These will hold the chute up when completed. Make sure they are all the same size.





Add the rest of the lines with thread. Also add another piece of wire at the top with epoxy or solder, as the main line. The threads and wire are then painted either black or white.



Extra detailing is possible with more lines, the air vent hole at the top of the chute, etc. Attach the drag chute to your model. A spray of Testors Dulcoat might be advisable first. Don't forget an opened chute pack at the end of the car where the chute comes out. A longer lead-out line of wire should also be used.

Round chutes don't have to be used. By cutting out panels, all kinds of patterns can be made. Rips or broken lines can also be added, as this does often happen at high speeds. This is a 1/32 scale model, so the chute had to be smaller. Don't make the chute so large that it dwarfs the car.





# BUDGET RACER

Here's a ready-to-run 1/24 scale car for those new "RTR" races that are sweeping the country. At \$4.00 each, we heartily recommend it!

Just getting started in slot racing? Or maybe you want a car for the new "ready-to-run" class that's gaining in popularity around the country? Or perhaps you just want a car that's fast, smooth, durable, quiet, fun and doesn't cost a jillion dollars to boot.

Well, believe it or not, there's a car like that available! Action World, a new mail order firm on the West Coast, just sent us their own 1/24 scale ready-to-run "Modified Can-Am Lotus" for our evaluation. The car was specially manufactured for them by one of the West Coast's leading model car racing manufacturers.

What's it got? What does it cost? Well, how about these fantastic features: Fully adjustable black aluminum

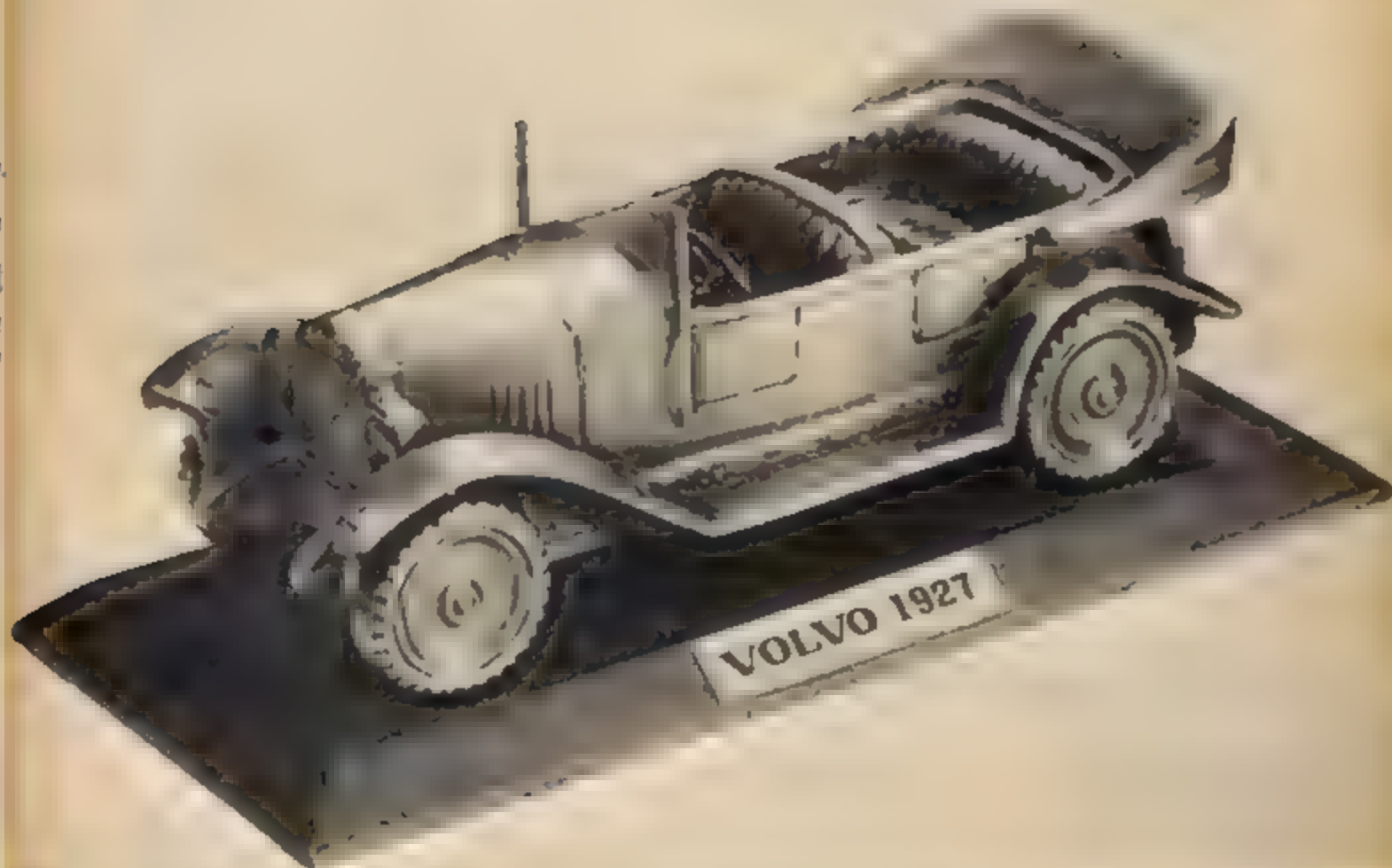
anodized chassis; deluxe vacuum-formed modified Lotus 30 body, completely pre-painted; "big" sidewinder Mabuchi motor; Rigen precision wheels with Super Sponge closed-cell rear tires; packaged in a clear plastic case that's perfect for use as a parts box. The price? \$4.00! This car originally was made to sell for \$12.95, but Action World is offering these for just \$4.00 each as a "get acquainted" offer.

We've driven it and we can testify that it's as smooth as silk. At \$4.00 it's one heck of a bargain. You can get yours by sending \$4.00, plus 50¢ postage, to Action World, P.O. Box 1164, Thousand Oaks, Calif. 91360. You can't go wrong on this one. It'll get you in the race for peanuts, and it has the steam and handling to win.





# THE AMERICAN COLLECTOR



While there are many European firms manufacturing contemporary die cast model automobiles, Rio of Italy and Solido of France are generally acknowledged to be the producers of the finest, most realistic exact-scale antique and classic cars in miniature. Solido's Bugatti Royale, Mercedes SS and several others, including their recently introduced 1931 "J" Duesenberg, are probably the most desired 1/43 scaled miniatures in the world. For a little change of pace this month, I think you'll be interested in the fascinating history of the Solido Company.

A new method of production of metal die castings appeared after World War I. This method consisted of injecting the melted metal under high pressure into a metallic die; the metals used at that time were principally tin and lead alloys. This new method proved to be most advantageous as it made possible thin-walled and complex thin-walled and complex-shaped castings.

The introduction of this technique

in Continental Europe, and especially in France, was due to the efforts of Monsieur F. de Bazeilles who, before launching production of toys under the trademark SOLIDO in 1932, devoted his activities to the production of industrial die castings.

In 1932, for the first time in Europe, a toy produced by the die-casting process was presented under the name SOLIDO. This toy was strong and a major advancement over bent sheet metal toys, the only type known at the time. The first Solido die-cast cars were painted or chromium plated and a patent was issued to Solido for the principal of a toy that could be disassembled.

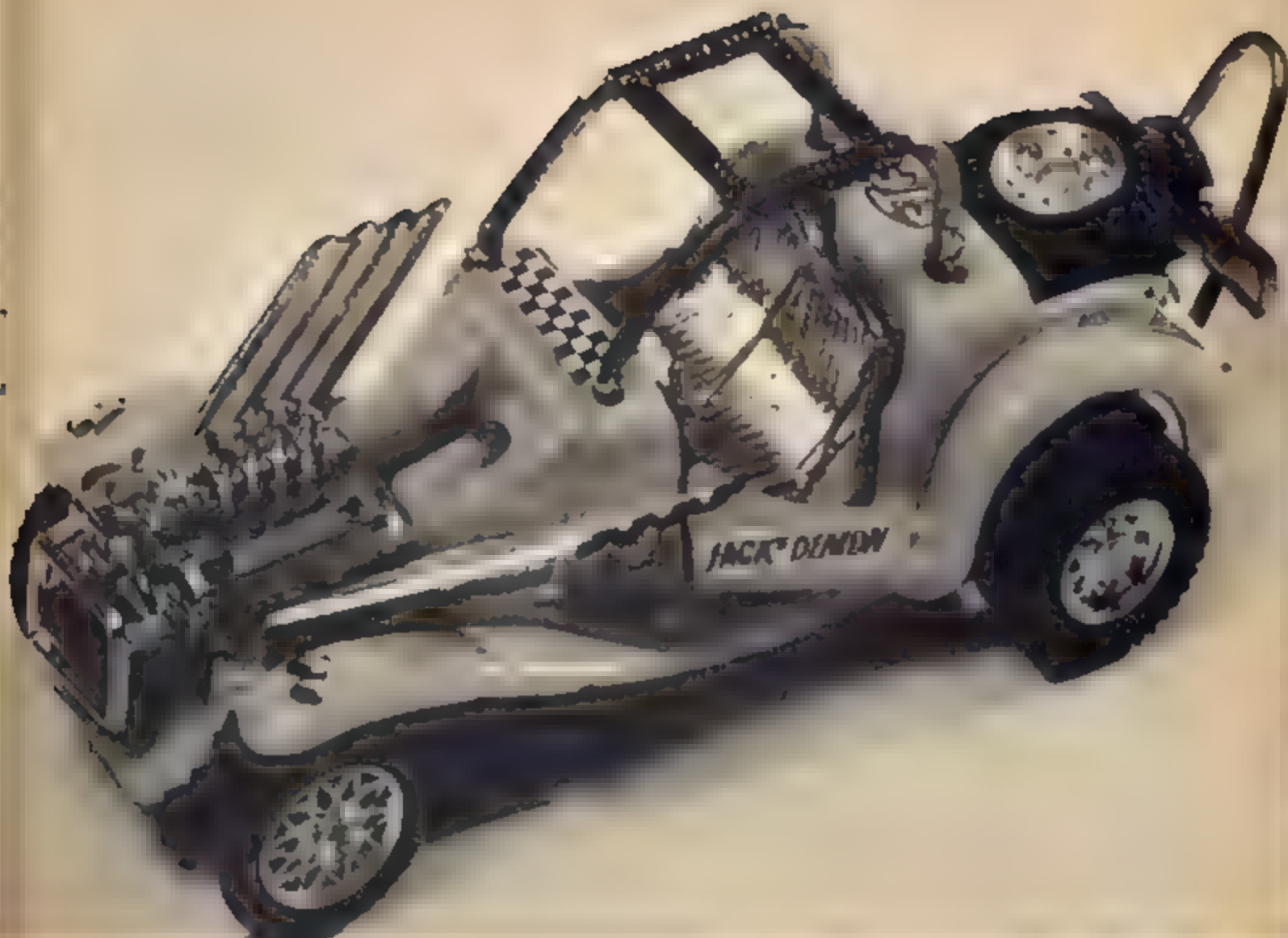
The quality of this new technique appealed to the public immediately. The cars were so attractive and so strong that one of the publicity stunts used as part of the Solido sales promotion campaign consisted of using these cars as roller skates!

The following year, other cars of a smaller size, and equipped with mechanical motors were introduced.

This category was named "Junior" and was followed by even smaller models named "Baby" which were in the 00 size. Production of the "Baby" category was ended in 1950.

From its beginning, Solido developed rapidly. In addition to miniature cars, other toys which could be disassembled were produced, army tanks, farm tractors, plane mock-ups, guns, rifles, etc. A collector who had kept one of each of these toys would at the present time have at least 400 different models.

Over the years Solido has developed and introduced in the market numerous improvements which have been adopted since by other manufacturers. The following are a few examples: the "Jaguar" model by Solido (#100) was the first miniature car in the world equipped with springs which greatly improved the movement, the "Lancia" model by Solido (#121) was the first miniature car in the world whose doors opened, the "Ford Mustang" model by Solido (#147) was the first miniature car in the world with an



interior lighting system activated by opening either door just like an actual car.

The Solido factory employs the most modern techniques, using largely automated equipment. About 25% of its production is exported throughout the world.

At the present time the factory is directed by the three children of the founder who, in spite of his 78 years, is still most dynamic and takes great interest in the problems of production and marketing.

From its earliest years the engineering and die-casting department has allowed production of about ten new models per year. In order to maintain the value of the Solido collection a certain number of models are withdrawn from the catalog each year.

While many of the customers of Solido are indeed children, thousands of adult collectors throughout the world consider Solido, especially for their "Golden Age" classic series one of the outstanding manufacturers because of their exactness, quality,

impeccability and selection of cars chosen for reproduction. Because of these advantages, collectors favor Solido even for its cars produced before 1939, which are at present in keen demand and very expensive "second hand" as collectors items.

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Mercury of Italy is out with the first 1/43 scaled dragster we've seen. Called "Jack's Demon Dragster," it is white with a big chromed engine, four chromed pipes shooting out each side at wild angles, removable roll bar, wide boots on the rear and spare, "Shell" and "STP" decals, pair of eyes on each front fender and the doors open. There is a hole in the left rear fender where Mercury had apparently planned to put a tail-light but changed their minds so don't think there is something wrong with the one you receive. The dashboard shows every instrument clearly and there is a split steering wheel and chromed stick shift too. Four stars to Mercury for its originality.

While a different breed of cat than

most of the collectors cars we review in this column, a solid metal 1/30 scale model of the Volvo, the 1927 "Jakob," will surely be of interest, at least to Volvo owners! With its bronze-like finish mounted on a wood base with engraved identification plate, it makes a beautiful and rugged desk ornament or paper weight. Manufactured with the blessing of the Volvo company itself.

Next month this column will include a review of Rio's stunning pair of 1931 Phantom II Rolls Royce Convertible Roadsters.

Incidentally, I'll be at the first Annual Invitational Antique Sports & Classic Car Show at the International Amphitheatre in Chicago October 14, 25 and 26 and will be looking forward to meeting my friends there at the Sinclair Auto Miniature booth.

By David Sinclair



# **BUILD THIS U.S.R.A. WINNER**

By Lynn Fletcher and Mike Morrissey

Here's one just like the race winners are using.

This latest chassis is a winner, and everyone likes a winner! It's a 3-15/16" x 3-7/8" chassis, the most popular length-width chassis with the pros right now. This new chassis is generally easier to drive than previous versions and produces more traction, while tilting less.

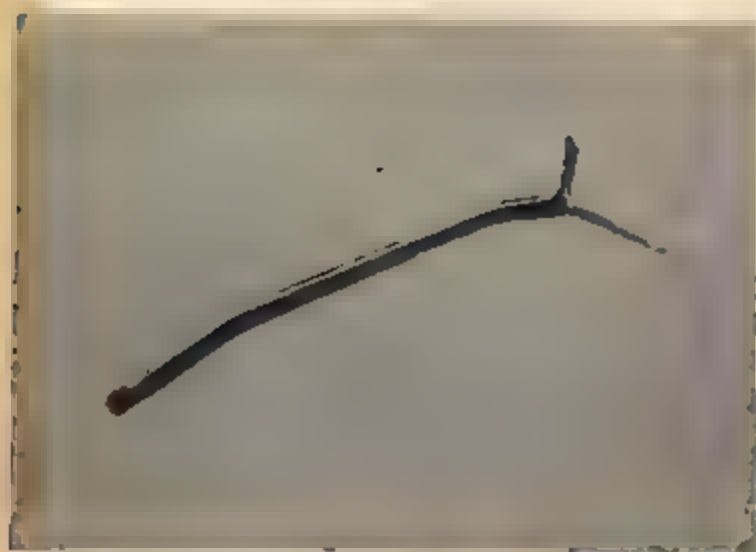


To build a 3-15/16" wheelbase chassis on a four inch jig, build up the rear pegs with tubing.

42/Model Car Science



With the big pegs, the rear end will look like this in the jig.



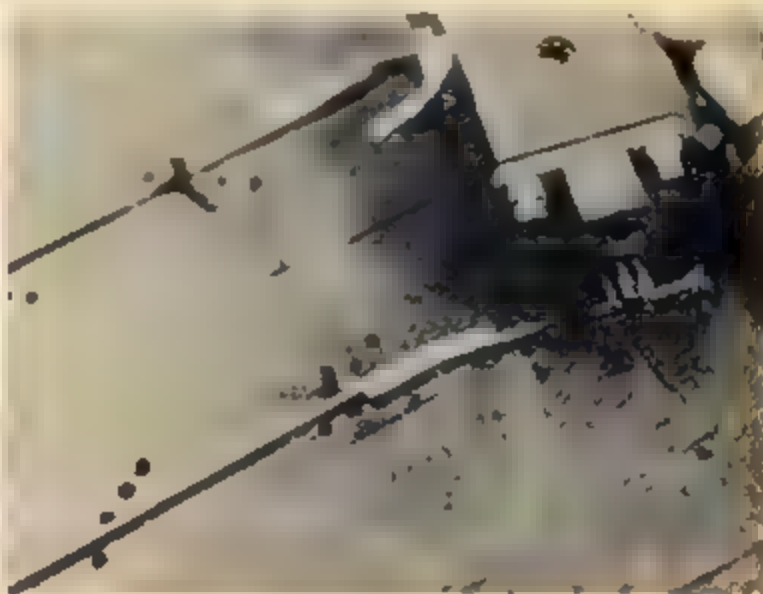
*The right half-rail is .055" round wire.*



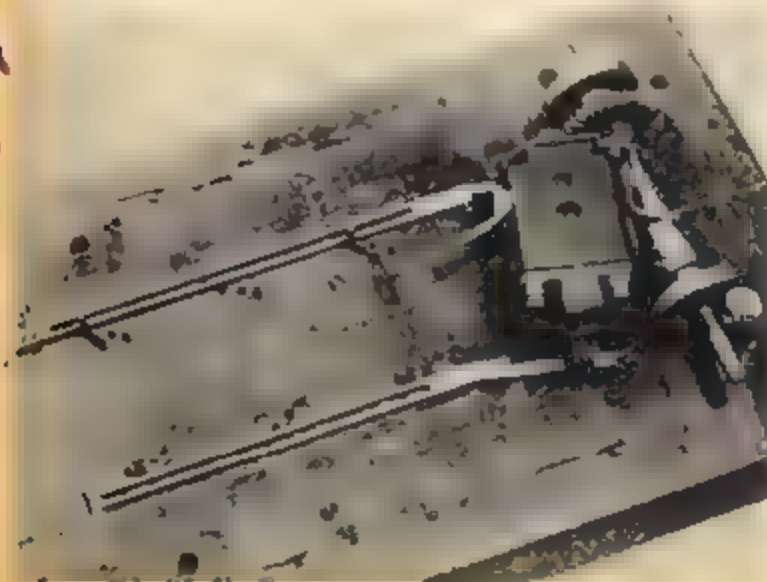
*The first rail is .047" piano wire, the jig is set for a 1 1/4" drop arm.*



*The left half-rail snakes around the motor like this.*



*Bend the main rail to fit the half-rail.*



*The two outer rails look like this.*



*After putting a .047" crossbar in front of the motor, lay a .016" thick piece of 1/4" wide strip on it.*





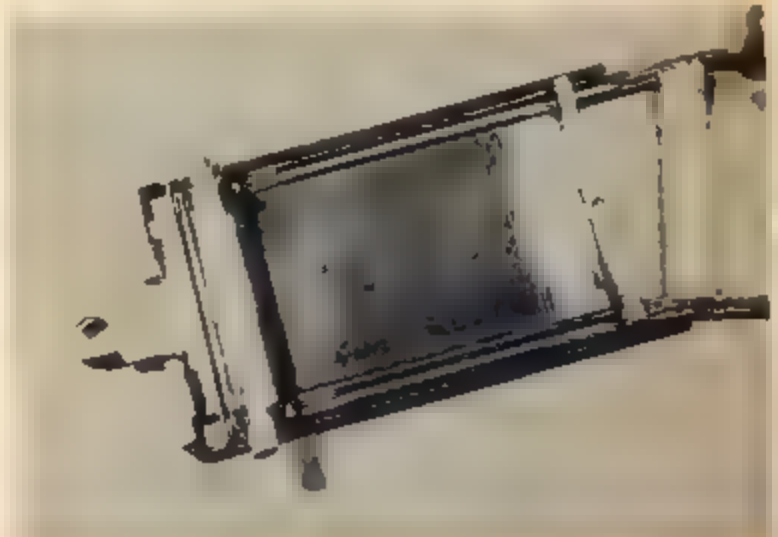
Lay in the .055" front axle braces like this.



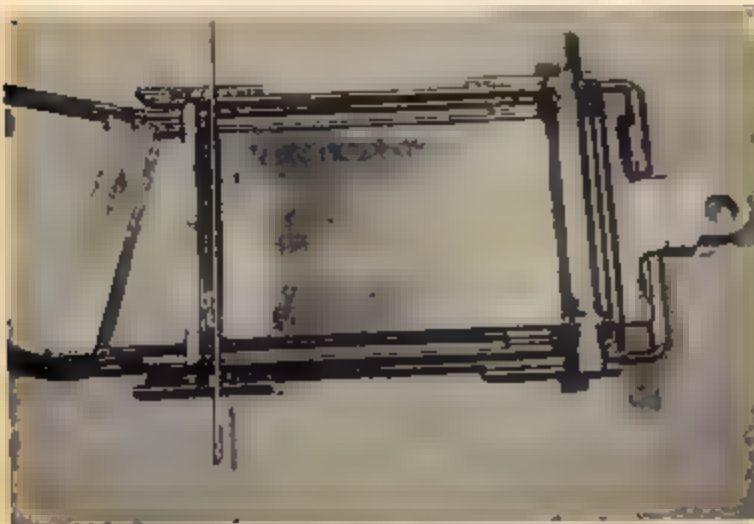
A .047" Associated drop-arm is used here. The pivot is 2-1/8" from center of front axle, which gives 7/8" flak lead.



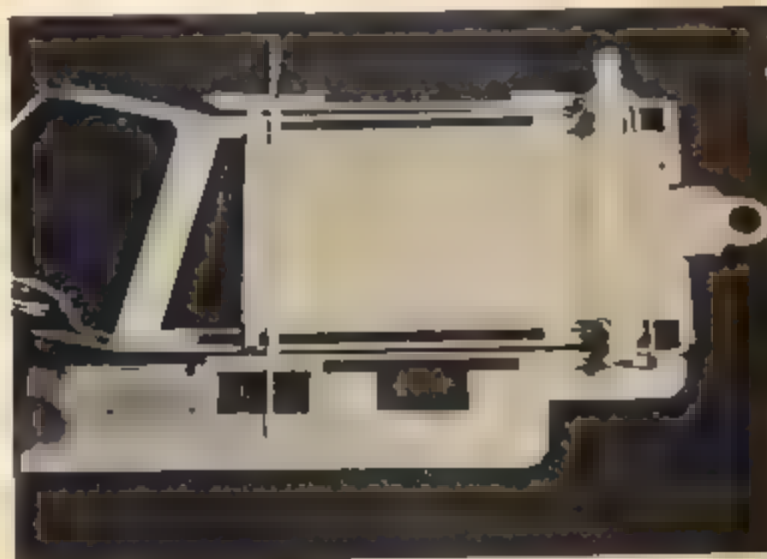
The up-stop is .032" wire, bent around the front axle braces. Solder on the plumber pivot tubes as shown.



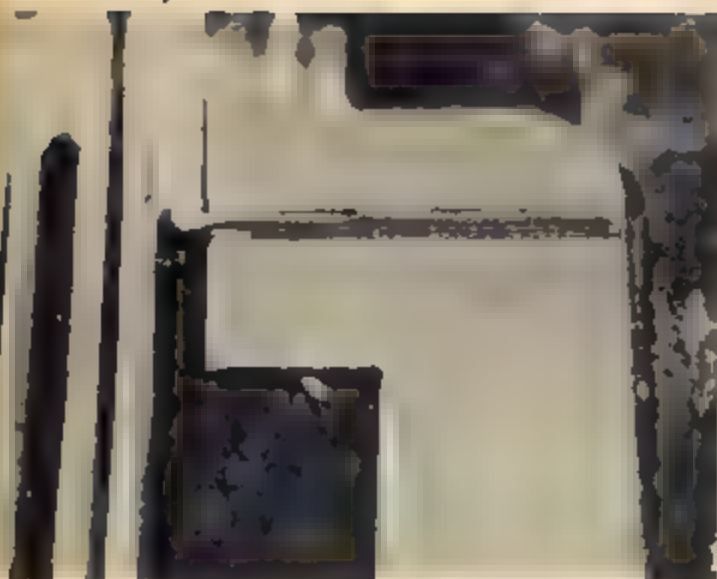
.055" plumber rails are used for a little extra "slop" in the assembly.



Crosspieces are .032" wire and go just in front of the front axle and the drop-arm pivot. The pan pivots are 1/16" tubing.



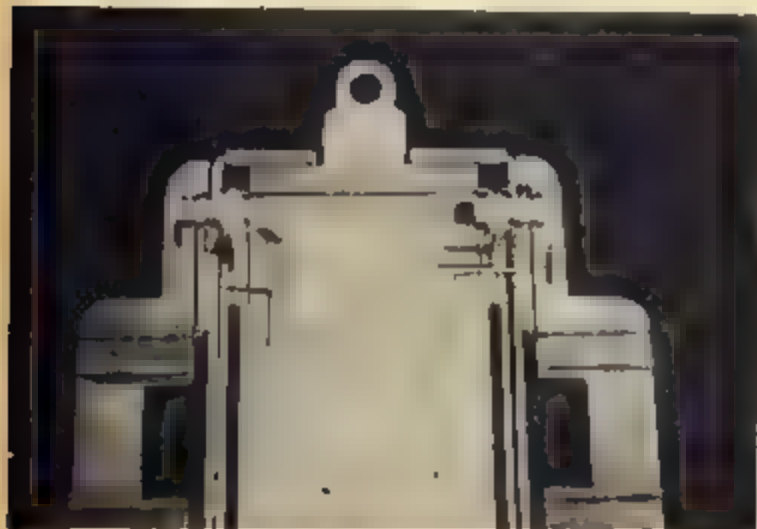
Use nibblers to cut out the pans. The material is .032" and is .680" wide.



Pan hinges are .032" wire, the pans are notched for clearance.



"Bullet-proof" the cross-piece with another piece of .032" wire. Use .020" wire to spring the pans. The upward stop for the "plumber" is .032" as are the downward pan stops.



"Spring" the front end as shown with .020" wire. The down-stop is .032". Cut away the front axle tube for freedom of movement.



The rear axle brace is .063" wire.



There you have it, a 5¼ oz. winning chassis. Additional weight can be saved by cutting a 1" wide x 1¼" long hole in the drop arm.







The newest Super Nova features a blown Chevy 427 fuel-burning engine, Arcadia Torque flite transmission and Ford locker rear end with 3.89 to:1 gears, mounted on a home-made chassis.



Very low profile on front end is added in surance against the car airborne at top speed Wild pearl hues of yellow and green were applied by Davis Custom Colors.  
46/Model Car Science

Photos by Tom West

# SUPER NOVA II



## RANDY WALLS' WILD "HOMEMADE" FUNNY CAR HOLDS ITS OWN WITH ALL THOSE "STORE-BOUGHT" ENTRIES

With funny car racing as tough as it is right now, it's hard enough to be competitive with proven manufactured parts, and the day of the homemade successful hot rod seems to be in the distant past. However, a 27-year-old San Diego, Calif., racer doesn't believe this and he's really doing a job of proving himself right. Randy Walls began with a C/MP '55 Chevy and graduated to a '65 Chevy II which, though it was quite overweight for the class, was quite competitive. This was followed by a '67 Corvair roadster with which Randy achieved a best ET of 8.10 before the car was totally destroyed in a spectacular collision

with another car.

This Chevy II, the newest of the super funny cars running under the control of Randy Walls, is the greatest triumph yet for the young racer. His chrome moly chassis is relatively short for the class with a 116½-inch wheelbase. It features a torsion controlled front suspension and 42-inch long traction bars, all fashioned by the owner. His brand mag wheels are used front and rear with small Goodyear tires up front and 13.00 x 16 M & H Race-masters biting the strip at the rear. For added traction at the rear, Kon adjustable shocks are used with coil springs. Randy installed a Ford rear end into

this car and retained the stock drum brakes with Velvetouch linings.

With the help of his sponsors, Pacific Speed Supply, Don's Speed Center and Chenoweth Racing Products, Walls built his own powerplant for the new car. It's a 427 Chevy "Rat Motor" burning a 50 per cent solution of nitro. Internal parts include Johns pistons, Howard's rods, Donovan exhaust valves (stock intakes) and a Crower roller cam and kit with 560-inch lift and 350 degrees duration. Valley Head Service prepared the heads for better breathing and a set of Chenoweth headers were added. Randy prepared the 6-71 supercharger which boosts the pressure of fuel coming in through early Hilborn four-port injectors. Fire comes from a Cirello mag locked in with 34 degrees advance. Intake manifold and blower drive are by Cragar.

Over the chassis/engine combination was mounted an exact fiberglass duplicate of a '69 Chevy II, built and adapted to the chassis by C.F.P. Company in San Diego. The interior aluminum work was done by another well-known west coast racer, Dee Keaton. The attractive finish on the car is a pearl yellow with pearl green top, webbing and stripes. This was handled by Davis Custom Colors in Anaheim, Calif.

Together with his wife, Cheri and his in-laws, Jim and Jean Waite, Randy can be seen at virtually every top funny car race in the southwestern part of the country. This family group has become very familiar to western drag race fans. How well do they perform as a group? How about a best ET on the car of 7.55 and a top speed of 191 mph for a start?

Randy's attractive wife, Cheri, is chief crew member of the Super Nova, making this car a true family project.  
October 1969/47





# ***THE WILDEST "DUNER" YET***

Monogram's 1/24 scale "Rommel's Rod" provides us with the most insane dune buggy of all time.



By Robert Schlicher

Rear of vehicle includes armor details, spare tracks, two rings and protected ball mount for rear defense machine gun. Radio set and gas cans mount on fenders.



Tom Daniels' latest effort in Monogram's series of 1/24 scale wild designs is this "Rommel's Rod" custom command car/half track.

If you're the designer of the wildest car to roll into the rodding scene—say something like the "Red Baron"—what do you do for an encore? How about using a design theme based on some vehicle used by one of the more famous personalities of the second World War? How about that, indeed, Tom Daniel? Your latest creation, "Rommel's Rod," may be even better than your "Red Baron" as a mod show rod.

Both of these fantastic designs take an historical theme and envelope it in design details into a pair of show cars that are a world apart from the "normal" hot rod-styling school of thought. The "Red Baron" incorporates styling features like a giant-size World War I battle helmet and a multitude of Maltese crosses to adapt WWI era styling to a modern rod. The latest Daniel creation, "Rommel's Rod," draws on a similar "historical"

inspiration, but with an even greater degree of abandon than the "Red Baron."

Field Marshall Erwin Rommel, for those of you weak in World War II history, was one of the most famous and successful German commanders of the period. Rommel's uncanny success with troops and tanks on the North African desert earned him the respected nickname "The Desert Fox." Reference books on the WWII campaigns in the western desert of North Africa indicate that Rommel made extensive use of both German and captured British armored half-tracks to command such a vast battlefield from a mobile platform.

Tom Daniels' hot rod presents a rodder's version of the type of vehicle Rommel might have used for high-performance and high-speed tours of his desert forces. "Rommel's Rod" sports a customized Mercedes-Benz open



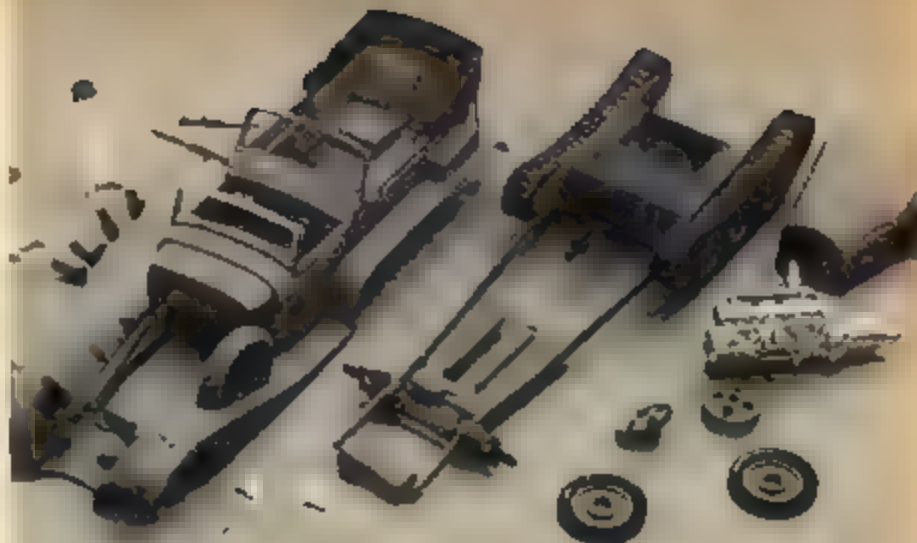
tourer body of the pre-war style with a giant supercharged Mercedes straight-eight engine. Fat dune doughnut tires were yet to come in Rommel's time, so tank-type "tracks" provide drive and "sand flotation" with conventional rubber tires and steel wheels up front. A giant steel roller at the extreme front of the command car helps to keep the nose from digging into the sand at the base of dunes and hills.

The open-tourer body provides separate driver and command compartments for the bare bones remains of a 1/24 scale Field Marshall Rommel and his chauffeur. An MG34 Mauser machine gun is ready at the driver's right. The "command" compartment floor simulates well-to-wall ammo cases while the Field Marshall's skeleton sits behind his map table peering through binoculars. This compartment is designed as an armored enclosure for protection against surprise attack. A second machine gun, on an armored ball mount, protects the rear of the command car.

The exterior of "Rommel's Rod" is authentically detailed with items typical of such command and armored vehicles. A set of track segments and two eyes adorn the rear deck with extra gas cans and a radio mounted on the rear fenders. The kit contains an entire set of German insignia, staff car, and palm tree markings typical of those used by Rommel's real "Afrika Corps." For a bit of a different touch, the car in the photos was marked with Studio Brand decals #72-13 "German Armor..." Third Reich flags across the hood and "Afrika Corps" insignia. German armored vehicles often carried flags across their topsides to identify them for Luftwaffe support aircraft. The kit can be left an out-of-the-box desert tan or sprayed with Pactra's flat(no gloss) "Light Earth." Many of the actual WWII German vehicles in North Africa were a simple tan like the stock kit plastic. Others were marked with slightly darker spots like the car in the photos.

The command car of the Afrika Corps "Desert Fox" commander will obviously stand out on any modeler's shelf. The "desert diorama," with its scale palm trees and near-white sand, serves to add even more interest to the car, and a ready explanation of just why and where such a wild machine might appear in real life. Naturally, the same diorama could serve to spotlight your favorite dune buggy, too. Sure, you can think of "Rommel's Rod" as the ultimate dune buggy. The Desert Fox's command car can outgun any insolent buggy that it can't outclimb or outdrag. There's never been a rod or a dune buggy like this mammoth masterpiece.

BQ/Model Car Science

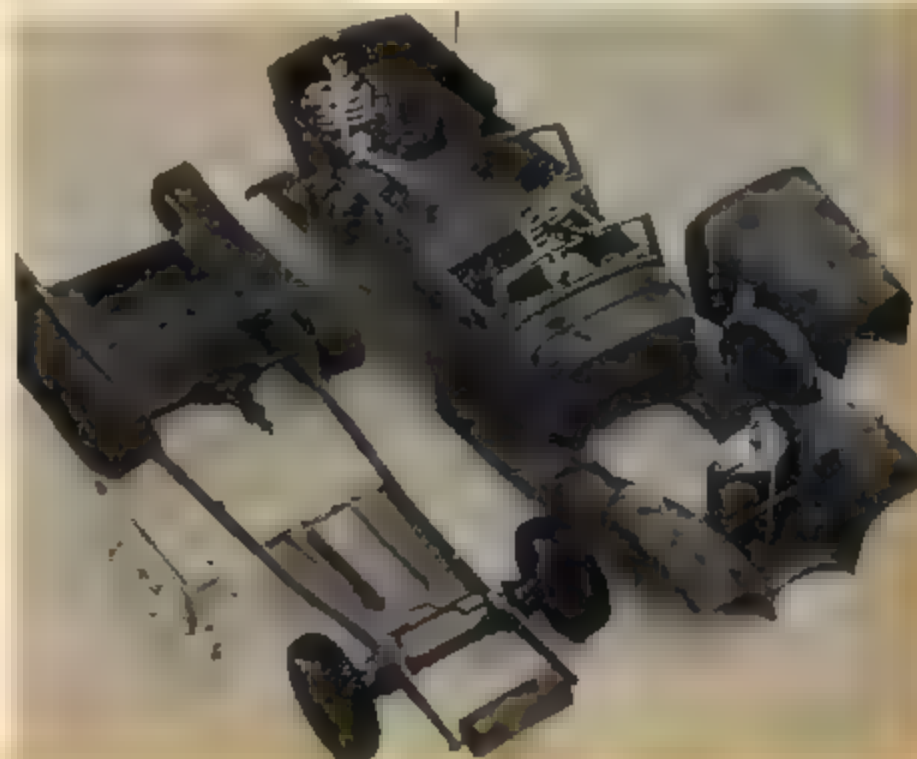


Assemble the kit, following Monogram's instructions, into the major sub-assemblies shown for painting. Plastic's tan color is nearly correct for "Afrika Corps." A spray coat of Pactra's "Light Earth" and dabs of thinned "Dark Earth" will approximate German desert camouflage. #72-13 Studio decals provide flag on hood.

Aaro's \$3 book, **ARMOR IN THE WESTERN DESERT**, includes color paintings of German, Italian and U.S. camouflage as well as photos of Rommel in wheeled and half-track vehicles.



Half-track tracks and wheels at rear of "Rommel's Rod" are painted with Ulrich brand "gun metal," then dabbed with Ulrich's "rust" color at points of wear.





Kit has a wild and varied assortment of German crosses with stylized version of "Afrika Corps" palm tree for spare tire's chrome cover plate.



An off-the-road rod like "Rommel's" deserves a special display base. "Pool Sand" for swimming pool filters is nearly fine enough for 1/24 scale with Britains' 1/32 scale Date Palm and Coconut Palm tree kits for desert foliage.



Britains' two different palm tree kits are soft plastic, snap-together items with excellent realism. Colors are molded in and bases are part of kits.



A 10" x 14" metal baking pan can be used to contain the pool sand for our desert diorama, or a base can be folded from cardboard. Use about five pounds of sand. The palm tree bases are taped or glued to the diorama base and the loose pool sand worked

around them to just cover the base, leaving the "weeds" exposed. Shape the loose sand into undulating hills and valleys with the palm of your hand. For a permanent diorama, the wire handles of the pan can be cut away.



Press the rear tracks of the "rod" into the sand behind the car to simulate the pattern they would leave as they rolled across the sand. Then set the vehicle gently onto the sand. Location of the "sand dunes," trees, and display car can be shifted whenever you wish for a new look.





# TRACK BUILDING ON A BUDGET

Model car racing is one of the most thrilling and satisfying hobby/sports to have ever swept this country. Every Christmas, thousands of youngsters receive plastic snap-together slot racing sets. But it's a well-known fact that junior gets to play with the set for just a few minutes before pop takes over!

The majority of slot racing in this country is done on these plastic home sets, but there is also a hard-core group of slot racers who, while they too race at home, race on tracks of professional caliber. Some of these custom home-built layouts are absolutely huge, covering an entire garage or basement.

A common question: "How can I build a small home track without spending a fortune?" And there's

Would you believe a complete layout for under \$25.00?

always a remark to go with the question. "I don't have much space, either."

This layout is especially designed for this large segment of home racers. It's compact, fitting on one 8' x 4' sheet of 3/8" thick particle board, and it folds up against the wall when not in use. It won't interfere with your usual garage or basement activities. As a matter of fact, you won't even notice it's there when it's folded up out of the way.

But the best is the price—less than \$25.00, including controllers, a power supply and full scenery!

The problem of getting a sufficient lap length for interesting racing on one 8' x 4' board is not a small one. After some thought, the design you see here was chosen. It proved ideal in actual use. Check the drawing. There's every type of curve you could wish for—tight curves, sweeping curves, medium-speed curves and "squeeze" sections of

track where a maximum amount of driving skill must be utilized to avoid a collision. You just couldn't ask for more out of a slot track of this size.

The price may vary slightly in your locale, depending on the cost of wood, etc.

You'll have to rent a router and a 1/8" straight-face bit. The routing can be finished easily in an afternoon. Be sure to handle the router with care, as it can be a dangerous tool if misused. Do not wear watches or rings while you operate the router.

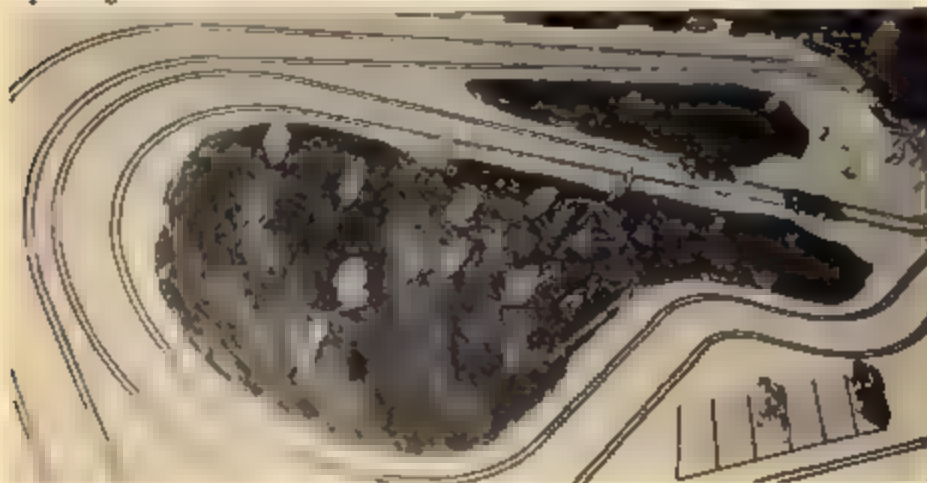
The main complaint from would-be builders is that they can't find the available parts they need to build the object in the article. The mail order houses that advertise in this magazine are usually the answer to this problem, as they are available to everyone in the country.

Particle board is ideal for use in building this track. It is easy to cut, patch, bend or nearly any other operation that you want to do to it. And it's inexpensive too.

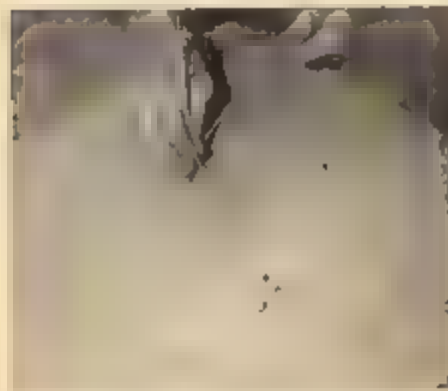
The routing operation is the toughest part of the project, but even that's pretty easy, so push and just be certain that the lines are accurate before you make a cut. Measure each item three times—and cut it once!

Unlike many snap-together commercial tracks, this one is completely free of electrical problems—the bane of commercial tracks.

If you've wanted to build a slot track, but the money and/or space problem stopped you, this is the end of your problems. You'll look a long way before you'll find a better slot racing track for any kind of money!



You'll have a ball with this "pro" home track, and when you're done racing you can fold it up against the wall and forget it.



"Lift" the track design from the plan to full size. Draw the curves in with a piece of string and a pencil, or a yardstick, using a nail as a pivot. Draw the lines representing the slots in lightly.



Drill a 1/8" hole at the entrance of each curve. Set the 1/8" straight-face bit for a 1/4" depth and place it in the hole. The other end of the home-made trammel point (see drawing #1) is secured to the pivot point with a nail. Lift the router bit out of the hole and swing it through the arc, checking to make sure that the bit stays over the drawn line. If it does, go back and set it in the pilot hole again. Hold the router firmly and make an even-speed cut, stopping at the exit of the curve.



After all the curves on the track are cut, you can do the straights. Use a straight board as a guide. Set the router in the slot and tack the board down (you can fill the nail holes later) with its edge snug against the base of the router. Do the same at the other end of the straight you want to cut. Check both ends of the straights for alignment. Cut the straights.



When you've finished routing, sand the slots with fine sandpaper to remove any burrs. Fill all holes with wood putty, then sand smooth with a sandpaper block. Vacuum the track, paint it with at least three coats of flat black or grey vinyl paint. The household variety is fine. The finished track surface should be as slick as possible.



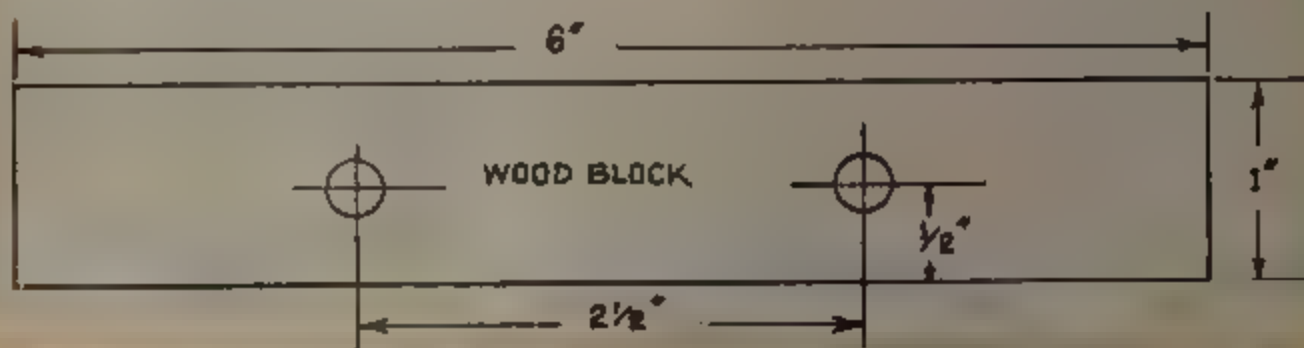
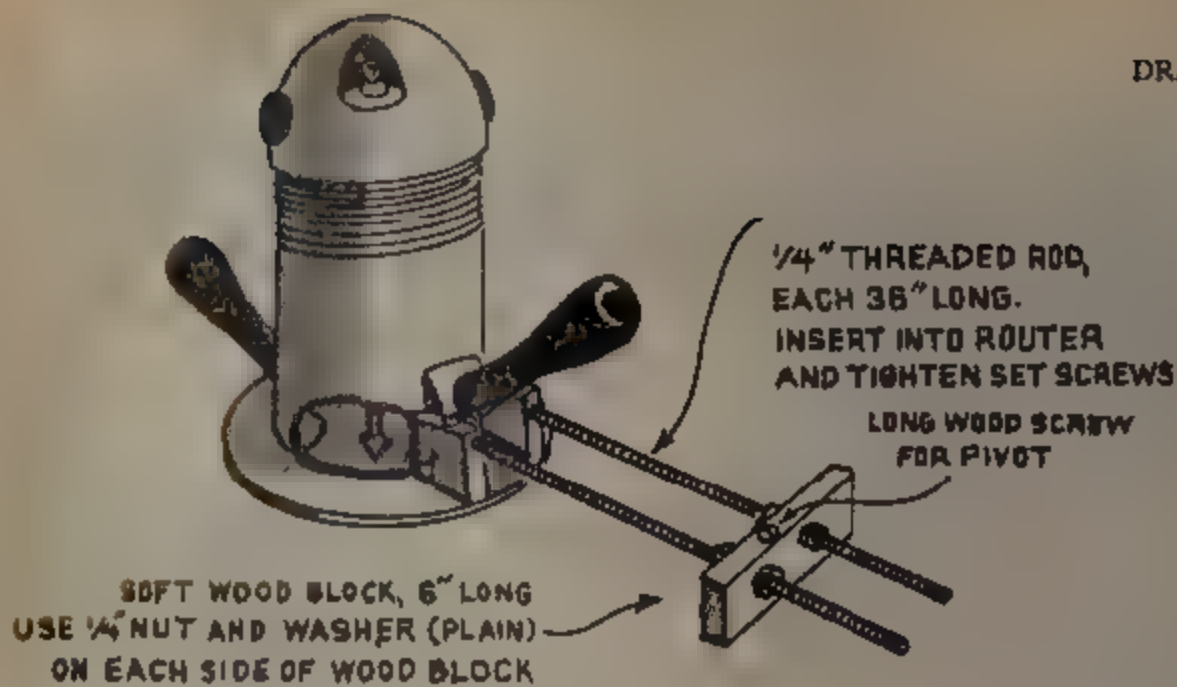
Screw and nail the lightweight wood frame to the particle board track. Install the track on the wall. The mounts are easily made from scrap 2" x 4" wood. Use a bolt as a pivot.

After the track is secured to the wall mounts, apply the tape. Smooth it in place with your fingertips, "stretching" it around the corners slightly to avoid wrinkles. Where the ends of the aluminum tape meet, scrape the adhesive away, apply a bead of contact cement around the edges (leaving a bare spot to make contact) and press in place. Punch a small hole in the center of each tape with an ice pick. Use a small bit in a hand drill and drill through the board, being careful not to tear the tape. Insert the wires from the control center (see wiring diagram) up through the holes, "fan" the individual strands, fold against the aluminum tape and solder. Finish the wiring, using the diagram as a guide.



After the track is wired, you can add scenery. Nail wood blocks of varying height where you want hills. Lay wire mesh over the block and tack it in place. Push it to the track surface with your hands. Nail in place. Trim around the track shoulder with a pair of tin snips. Make the shoulder irregular and leave room for the car wheels to clear.





A very effective fence can be made of 1/8" dowel rods and rubber bands, as shown here. The rubber bands do an excellent job of restraining spinning cars. Drill the holes for the dowel rods every three inches.

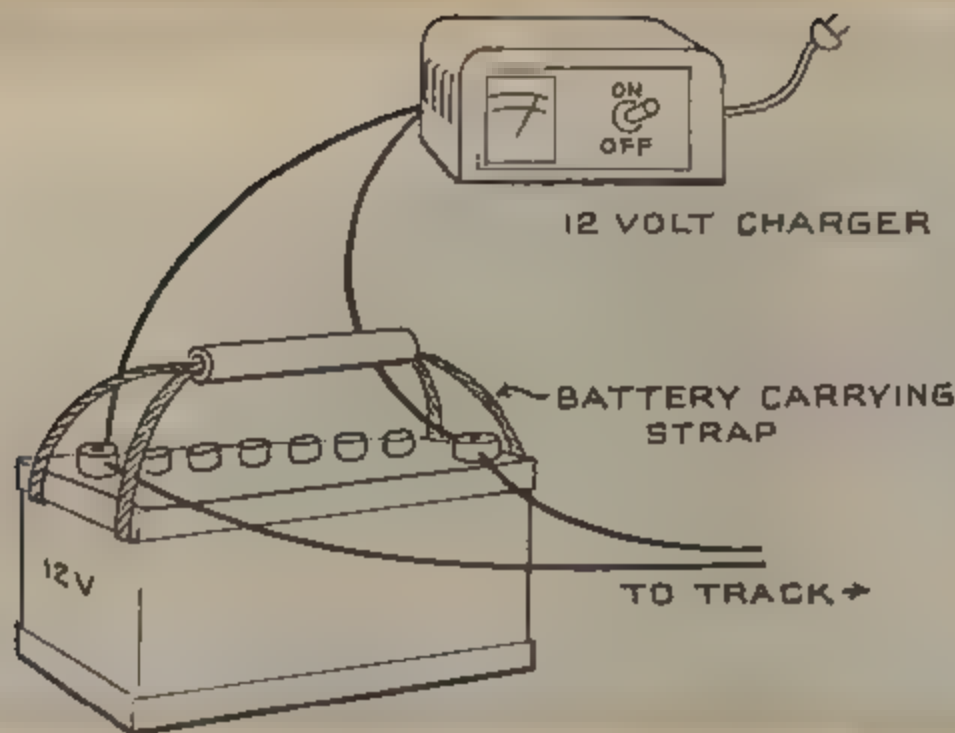


Mix up a batch of plaster and apply several thin coats with your hands. When it dries, spray it with flat brown and flat green enamel. Apply an even coat of brown first, then "mist" the green on until you are satisfied with the shading. A "mottled" effect can easily be achieved.

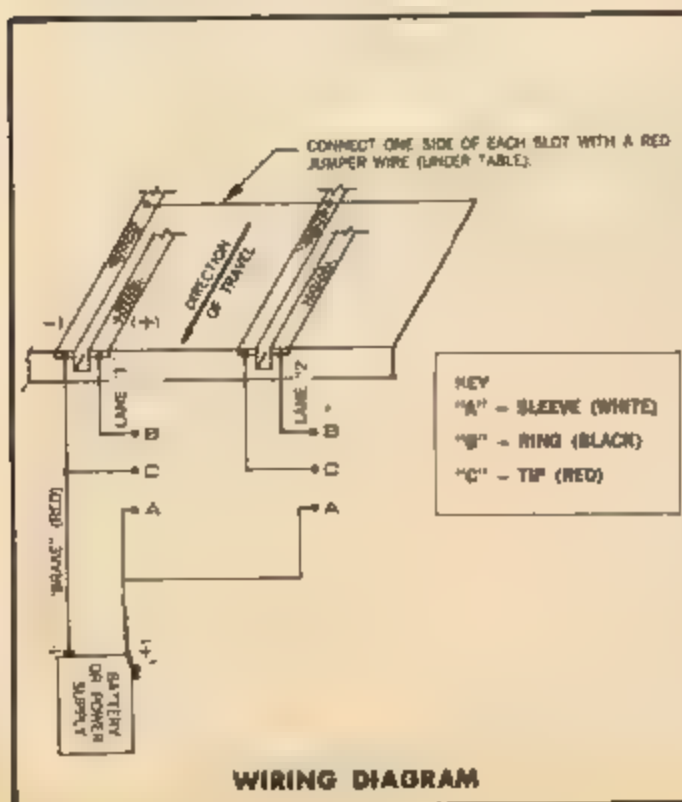
Glue the Monogram racing tower together after painting it, and position on the track. Drill holes and insert scale model trees in place where desired. Make billboards by cutting colored advertisements out of magazines and gluing them to cardboard. Spread them around the track. They add a great deal of color and atmosphere.







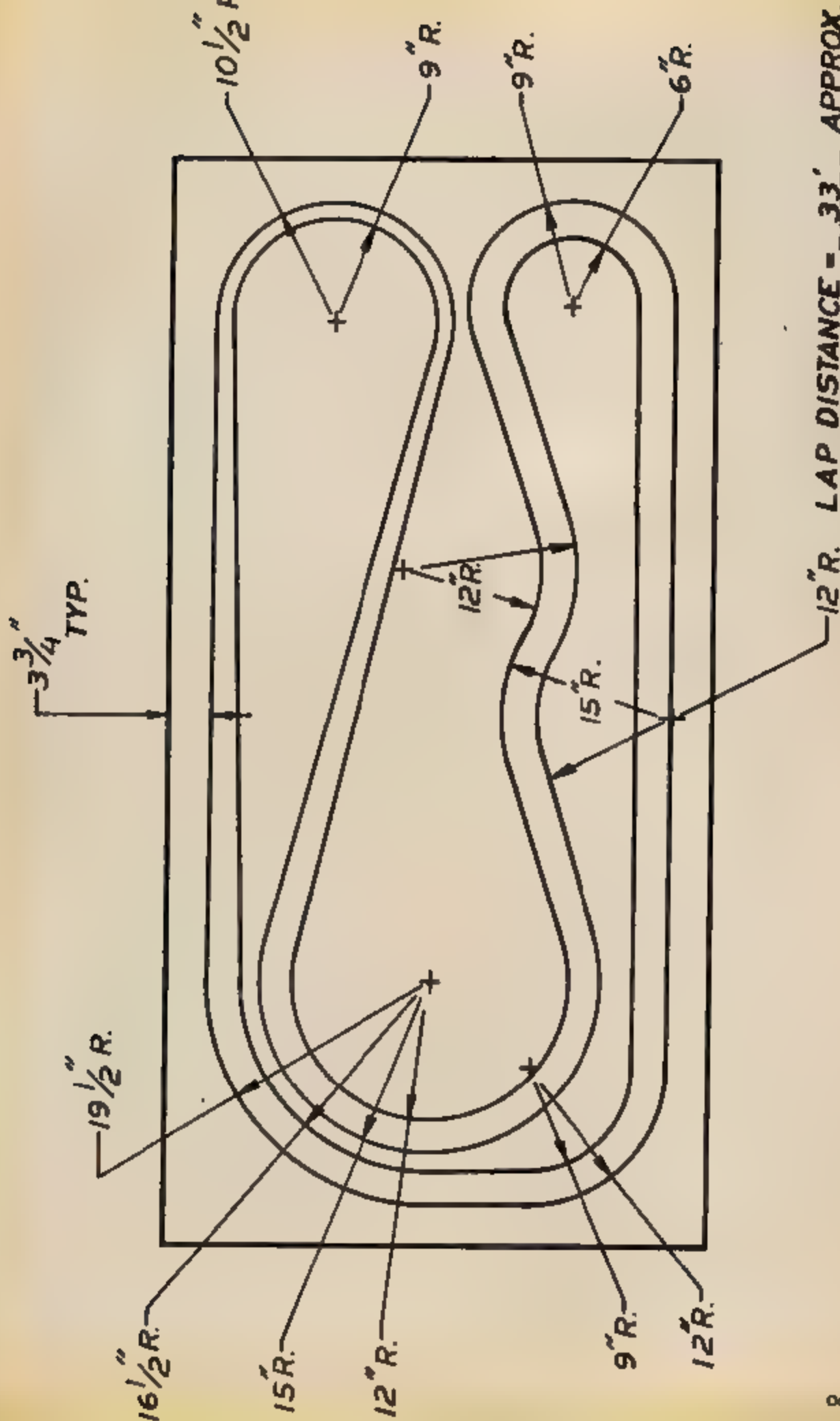
The automobile battery should be set on a wood box to keep it off the cold floor. Staple the wires to the wall and up under the track to keep things neat. An inexpensive trickle charger can be added to keep the battery permanently charged. Do not keep the charger on during racing, however. If no charger is available, don't worry. A fully-charged battery is good for weeks of racing and a recharge is inexpensive.



#### BILL OF MATERIALS

1 each, 8 x 4 foot, 3/8" thick particle board	\$2.86*
1 each, BuzCo aluminum track tape, 180' roll	2.98
1 each, 12 volt automobile battery. Available at nearly any gas station from their "junk" heap. Make sure it isn't shorted or has an open cell. Deals like this are plentiful.	1.00
2 each, Ruskit Formula 2 controllers, in kit form. Part number 810-KD. \$2.75 each.	5.50
1 each, quart of vinyl paint, grey. Available in any paint store.	1.98
6 each, brass wood screws, 2-1/2" long. Used for controller studs. See wiring diagram.	.30
1 each Monogram pit building, number RS3111.	1.50
1 each Monogram racing tower, number RS3112.	1.50
Several scraps of wire mesh, available from most hardware stores.	1.00
1 large sack of plaster of paris. Available in most paint or hardware stores.	1.00
1 coil (25') #20 gauge stranded, enamel covered wire.	.50
30' of 2" x 2" wood, for framing.	1.50
20' of 1" x 2" wood, for side frames.	1.00
1 set of Monogram spectators, number RS3103 (10 people per set).	1.00
1 set of Monogram drivers and pit crew, number RS3101. (12 people per set.)	1.00
Billboards — build as many as you like from cardboard, preferably white and smooth. Cut out nothing! pictures from magazines (colorful) and paste up your own advertisements.	(cost)
2 each carriage bolts, and 4 washers (use one on the inside, one on the outside, of each bolt) for the pivot bolts on the wall support. Should be approximately 5" long.	.15
<b>Total \$24.79</b>	

\* Prices may vary slightly according to locale.



LAP DISTANCE =  $33'$  - APPROX.  
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 DRAWING SCALE  $1" = 1'$

# DECAL MAGIC

Here's how to add proper pinstripes and decals to MPC's wild new "Telephone Booth"

Decals can add a sure-fire show-winning touch to almost any model car if you apply them properly. Any kit decal can be made to look as good or better than a hand-painted stripe or complex custom pattern. The catch, of course, is the "proper" application. Here's how to do it.

By Robert Schleicher

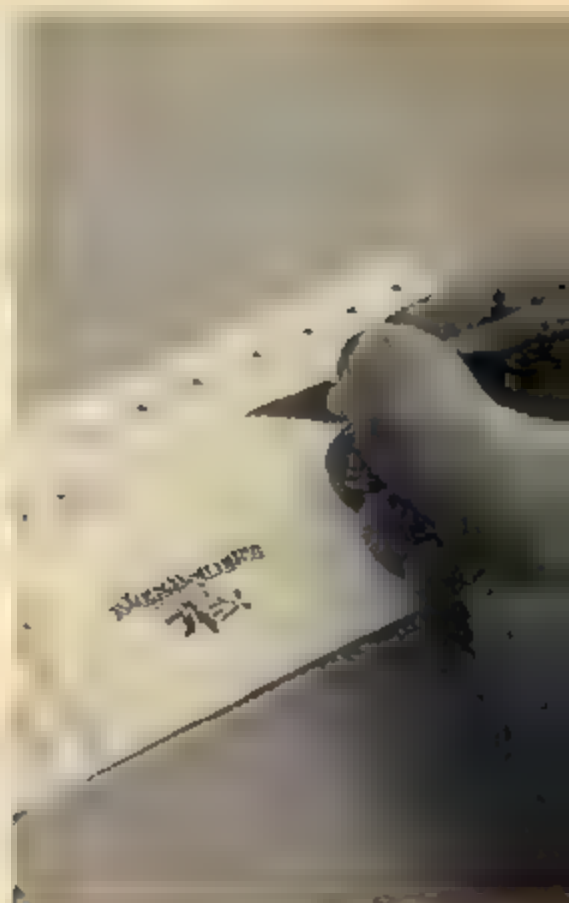


On most models, the decals are easier to apply before the final assembly of the major body, engine, and chassis components. MPC's 1/25 scale "Telephone Booth" decals duplicate the pinstriping on the real car. Scale model phone booth, engine and chassis details are equally accurate matches for Casper's car.





Decals can be made to look like they were painted right on the surface of your model if they're applied correctly. You'll need a piece of tissue, a paper towel or blotter, paintbrush, hobby knife, tweezers, scissors and Walther's "Solvaset".



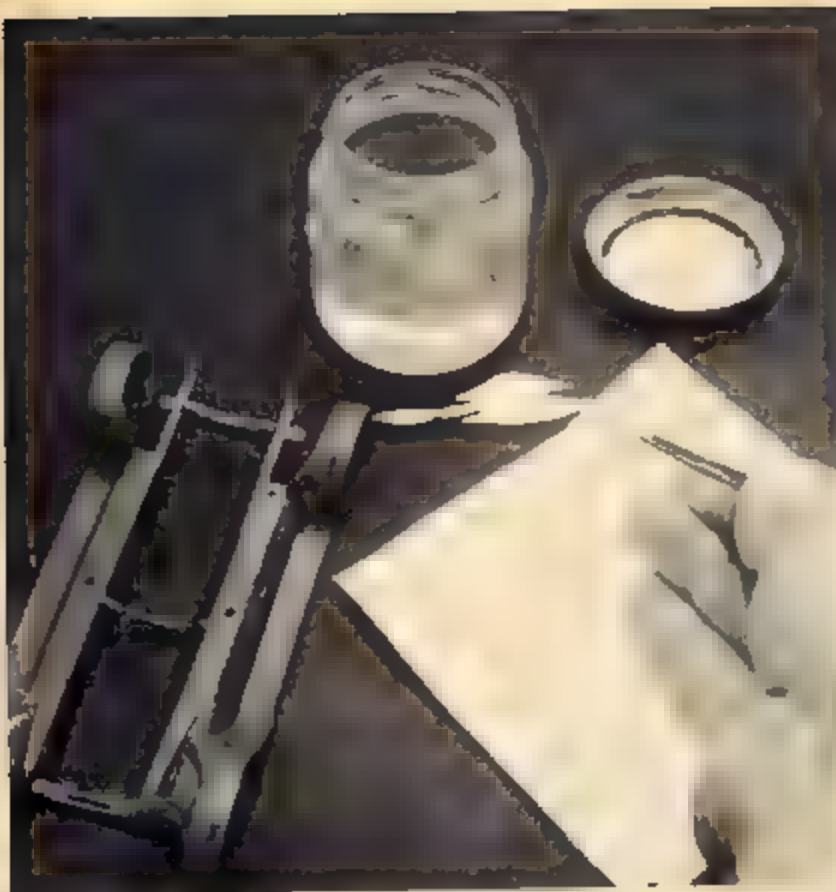
The clear portion of the decal usually extends past the colored edges. On complex decals, like the pinstripes for MPC's "Telephone Booth" model, trim the decals and the paper backing right next to the colored portion of the decal.



Larger decals with straight or simple edges can be trimmed from the backing paper with scissors. On this MPC model, the words "Telephone," the "A/TNT," and the roof decal were the only decals that could be trimmed with scissors.



The MPC "Telephone Booth" contains two different sets of fender trim--the pinstripes we used to match the real car, and a set of "mod" gold brocade panels with separate "flower power" flowers. Here, all of the pinstripe and other decals are cut, ready to soak and apply.



Hold the edge of the decal and paper backing with tweezers, and dip the entire decal into water just long enough for the water to cover all areas of the paper. Lay the wet decal and paper backing on a piece of paper towel or blotter for a minute or two while the water dissolves the glue holding the decal.

Where a decal must stretch or bend to fit the contour of the model's surface, a decal softening fluid, like Walther's "Solvaset," is a must to allow the decal to stretch and fit the surface. Apply a few drops of the fluid, spread over the surface and edges of the decal and blot dry after five to fifteen minutes.

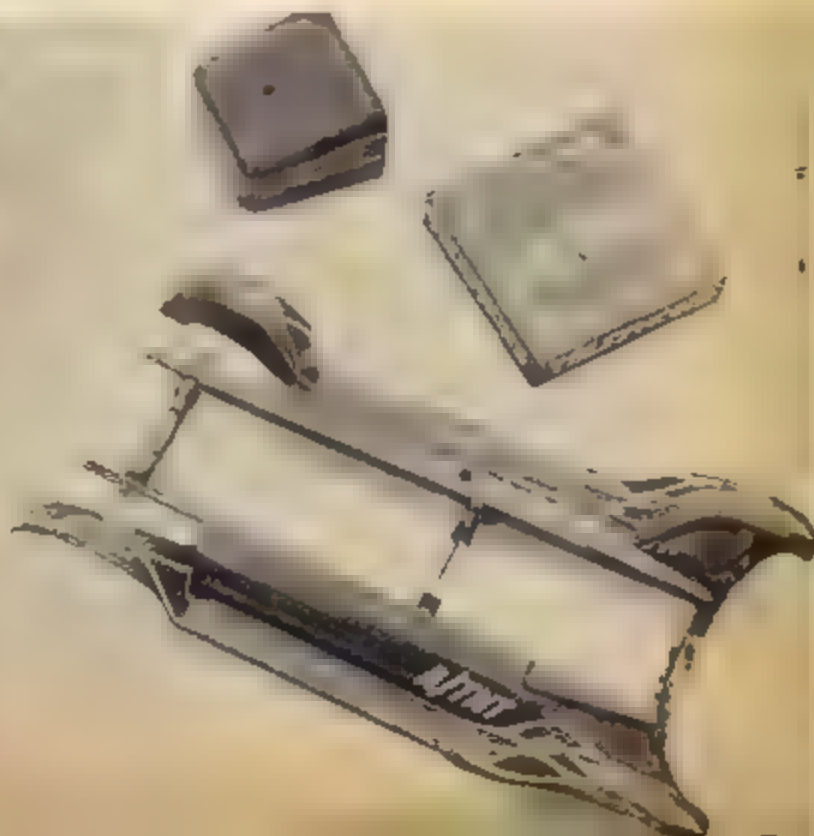


Walther's Solvaset



Position the decal AND its paper backing over the area you wish to decal. Hold the decal down on one corner with your fingertip and slide the paper backing from beneath the opposite corner with the tweezers. Blot away any excess water or air bubbles with a facial tissue.

The fender pinstriping on Carl Casper's "Telephone Booth" is very much a part of the real car. Hand-painting these stripes on a model would require an artist's talent and patience. Decals, applied following these tips, look like paint, with a minimum of work and time required.



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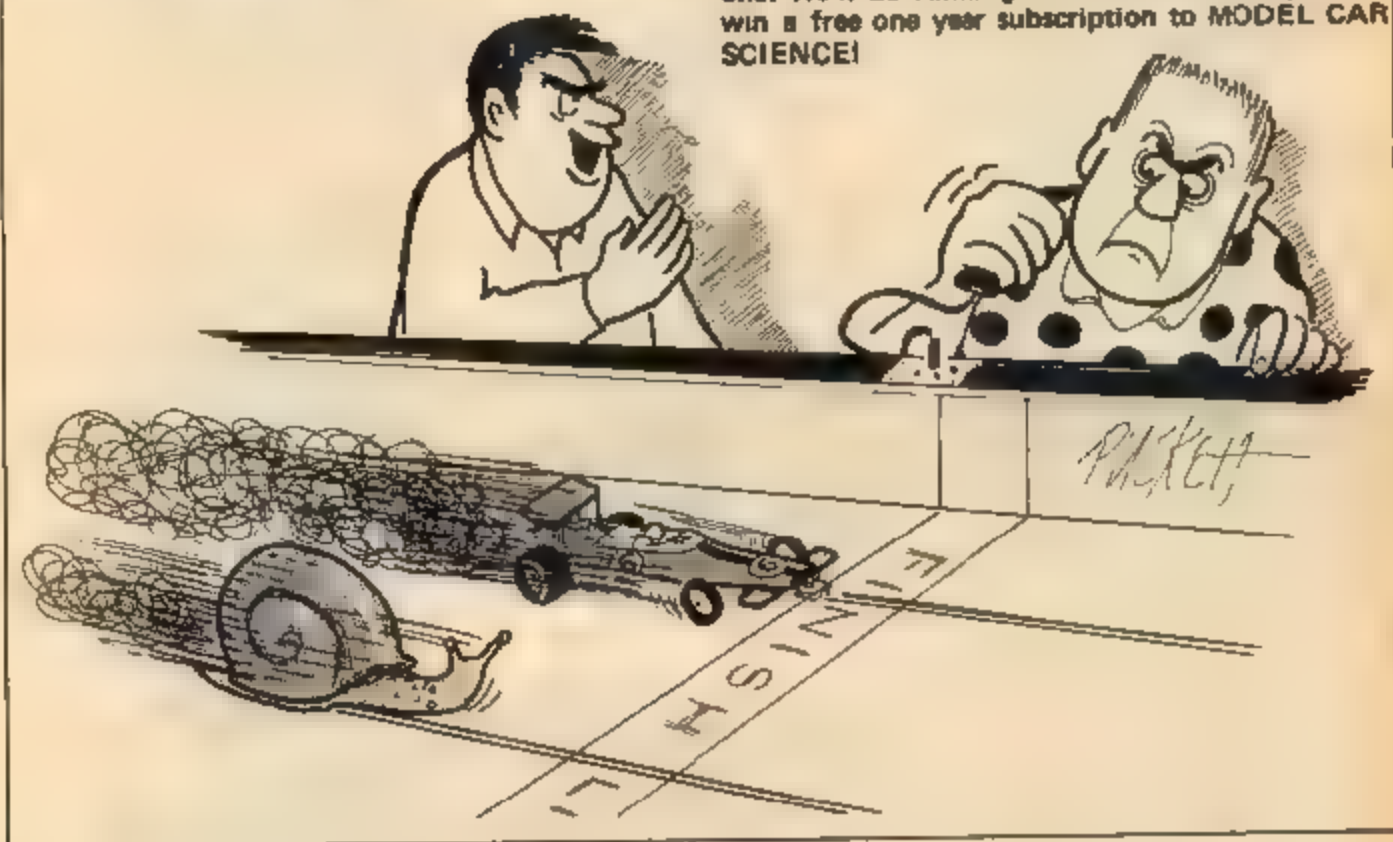
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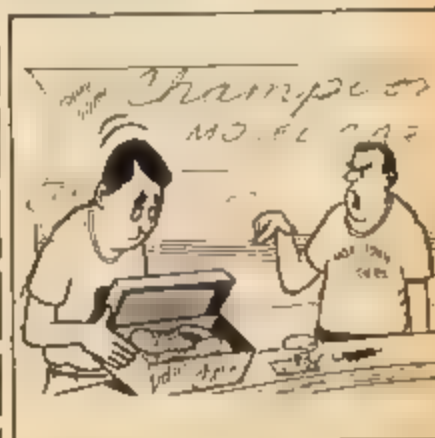
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62/Model Car Science

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# THE TECH SHEET

For the benefit of you H. O. fans out there, I've tested some new H. O. equipment from Mura. I might add that I was quite surprised with some of the results of these tests.

The first item I tested was the Mura #0705 high-performance armature. It is epoxied and balanced. It checks out at 17½ ohms, the same as the stock Aurora armature, but on the track it turned in the same lap time as a Speedwound armature that has only 7½ ohms and is unbalanced. On the dyno the results proved to be that both armatures turn about the same rpm, free-running, and both armatures turned about 14 feet per second, wide open with battery power. But the Speedwound ran hotter (naturally because it is wound lower) and took more current.

Now, I'd better stop to clarify some of this test information. I tried as best I could to keep all other factors the same, such as tires, gears, etc. The only factor I wanted to change was the respective armatures. But in any kind of testing we find that parts vary and in H. O. this is especially true. Stock armatures vary in resistance, number of turns, shaft diameters, and in rpm, just as do any rewound armature regardless of scale.

I'd like to think these test figures are typical, and to the best of my knowledge they are. The amperage we are talking about is about .2 amps for the Mura and about .4 for the rewound armature. (I don't know wire size or turns on this rewind.) On a long track, without additional jumper wires from the powerpack, the rewind suffers from lack of voltage more than does the Mura armature, and this is to

be expected because the rewind has a higher power requirement than the Mura, although the rewind appears to accelerate faster on the dyno where it has full power at all times.

Now contrast the following test figures: the stock Aurora armature turns about 24,000 rpm, free-running, and the Mura turns between 32 and 34,000 rpm, free-running, while the rewind turns between 38 to 40,000 rpm under the same free-running conditions (gears removed and no load). So it would appear that the rewind drops its top rpm's more than the Mura because both cars, when under load, showed the same feet per second wide-open speed on the dyno. This is to be expected because the Mura has more turns of wire.

I'd better clear up one more point and that is the balancing as done on the Mura armature. There are three kinds of balancing: static, forced static and dynamic.

An example of static balancing is placing an armature between parallel razor blades and rotating the part slowly so gravity will act on the part and the heavy side will always be at the bottom.

Forced static is done on a regular balancing machine where the part is spun at say, 3000 rpm, and the machine records which pole is heavy (but that is all).

Dynamic balancing has to be done with an expensive balancing machine also, and the part or armature is turning at some predetermined speed just like forced static balancing. But dynamic balancing not only records which pole is heavy but which end of the pole is heavy, or out of balance.

Now the Mura armature is forced static balanced because the H. O. armature is so thin, with only two laminations, that it would be extremely difficult to separate one end from the other. In actual practice you'd end up with about the same results, even if you could separate the planes. So forced static balance is plenty sufficient for H. O. armatures.

I forgot to mention that the commutator is also trued on the new Mura armature, which helps the performance.

Mura also offers stronger replacement magnets for the Aurora cars. These are not just rezapped stock magnets. They use a totally different type of magnet material. The magnets are a vinyl-type material, as used in the Mura "Mighty Mite" motors. The magnets are flexible and can even be cut with an X-acto knife. Samples tested out to be stronger than stock Aurora magnets.

It is possible to sand or cut away a little on each side and get a closer air gap with the magnets. Very nice feature.

I guess I should comment that some H. O. Magnets listed as "high-performance replacements" for Aurora cars, give the same gauss readings as a regular Aurora magnet that has been

rezapped. At least this is what I've found in my testing of magnets and I've also found that if I used a big magnetizer and rezapped stock magnets individually with short, quick punches on the zap button, I can get a higher gauss reading than replacement magnets.

Mura is now selling their own replacement brushes for Aurora cars, but with one very important difference from others now on the market. Mura's brushes have a notch on one side which fits into the curved section of the brush spring. This prevents the brush from rotating as the motor is running. If the brush is allowed to rotate it causes arcing, and of course results in poor performance on the track.

The Mura brushes come in both copper (90%) and silver (93% silver). The silver brushes are softer and will wear faster, but give a little more rpm. The copper will last a lot longer and won't require cleaning of the motor as often. So it is the old story of "take your pick." The silver versus copper is an old controversy and it is the same regardless of brand or make. Personally, I stick to copper brushes.

Mura also came out with a rubberized abrasive block for track cleaning and this could be used to clean the comms also. All you have to do is chuck your armature into any hand drill and hold the abrasive block against the comm. In seconds, the comm is like a new dollar. Make sure you don't get the block near the soldered tabs or you'll sand your wires right off the comm, and the motor won't run.

Speaking of wires, Mura is also selling H. O. wire for 69 cents a spool in sizes from #34 gauge to #39 gauge and it has the solderable type insulation.

I left the best until last and that is the new Mura bat pan. John Cukrus designed the bat pan-belly pan, or whatever you want to call it. It really works. The pan is wider, heavier, thicker (.035") and it is designed so you don't have to put insulation tape over it to prevent shorting out the motor because its cut out sections clear the pickup and electrical connections.

The pan was made to fit under the larger clear plastic bodies like Lancer's. I found that a car handles better if you leave the mounting screws a little loose so the plate can shift back and forth slightly. This loose pan principle is true of all brands of belly pans.

Well, it looks like you H. O. fans now have another manufacturer entering your scale. I for one am glad to see Mura entering the market. Now the volume of sales is going to determine just how many more new items will come on the market in the future. I know that a lot of new items are planned by Mura, such as better, quieter gears, but you, "the consumer," will determine if they will ever go into production of these items.



# HOCCL World



Much talk, and even more concern as to where HOCCL stands in regard to the threat of the new "super factory modifieds" that are about to be released.

The question of where these cars will fit into the HOCCL scheme of things is quite understandable, and one that is beginning to raise many questions with our members. We too, here at HOCCL Headquarters, are aware of the rumors now going around in regard to these super cars. From what we hear, they are being prepared by several manufacturers who, up until now have only been involved with the larger scales. It was, we think, bound to happen.

We have been told that the cars, all of them, will be super-modified factory-prepared cars that will be race-ready out of the box and be able to compete with the best scratch prepared H.O. cars now running in competition. This would certainly mean faster than any stock cars now being sold by any of the H.O. manufacturers now producing cars.

The question raised with HOCCL is, just where will these cars fit in the HOCCL rules and what class will they run in. HOCCL is well aware of the problem these cars could create if turned loose as "stock" equipment. Certainly they would make just about every car now running in Stock Class obsolete. But it is very difficult to classify any equipment without having first seen it and tested it.

Manufacturers being as they are, and going by past performances, the chances are we here will not see any of these cars until they are for sale. To wait this long would be too late, what with an active race program already being conducted. Therefore, the HOCCL Rules Committee has just sent word that any such complete car, prepared to race by a manufacturer, will run in a separate class. There will be just one division in this class for the cars, as they come right out of the box. Such cars will run as FM, or Factory Modifieds. So then, should this threat ever be realized, you will find that HOCCL has already made provisions for it by listing three racing classes, Stock, Modified and Factory Modified.

We expect, of course, to hear from some of our members who do not agree with this ruling. But we think this is the only fair way of handling the situation. We should certainly appreciate hearing from anyone who has any information regarding this

issue. And please, if you do write in with anything at all, tell us the source; we should like to pass facts on to the H.O. World.

We are pleased this month to announce that two more leading manufacturers of H.O. scale equipment have joined HOCCL as Associate Members and will soon be applying the HOCCL Seal of Approval on their accepted racing equipment. First, Tyco, a name long respected in the H.O. industry. And Champion of Chambliss, the go-fast manufacturers of the big scale stuff.

Tyco has been burning much midnight oil and has, we have been informed, some real surprises in store for H.O. Competition fans. We know for a fact that the engineering knowledge is there. And so, we look to them for some new and highly competitive race cars. And new cars too, of course! Next month we hope to have a full rundown on what you can expect.

Champion is in, and off to a good start from what we can determine. So far, their only samples sent in for checking against HOCCL specs are wheel spacers in nylon, great, and at last, H.O. set-screw wheels, front and back. You'll have to look twice to believe it but they have done it. The tires are of the silicone type, and hefty. Overall, the rear units make for some large pieces of hardware but they come within HOCCL specs so their first two items are HOCCL approved. As soon as we can get samples of the other stuff they are cranking out, we'll let you know what the complete score is.

Some samples in from Richard Harrison's Hobby House down Monroe way, tires, tires and more tires. All colors, and marbelized too. This batch has to contain some of the widest and biggest in diameter we have ever seen. With the exception of the smallest pair sent, all others would be outlawed by HOCCL except for Land Speed record cars.

At this point we can't tell if Associate Member Auto World of Scranton is in the mail order business or the H.O. manufacturing business. Either way, we all benefit. Their latest package of samples to be checked out for the HOCCL Seal of Approval is quite extensive. They seem to have someone in their own engineering department who really knows the needs of the H.O. enthusiast and gets the equipment out in good shape.

Here's a further listing of HOCCL approved Auto World H.O. race equipment part no.

- AW 87003 Silver plated pickups
- AW 87004 Silver plated weighted pickups
- AW 87005 Silver plated pickups with leads
- AW 87006 "Tiger Tail" lead wire
- AW 87007 Silver motor brushes
- AW 87008 Copper motor brushes
- AW 87009 Hi-performance armature
- AW 87010 Silver plated commutator

- AW 87011 Blank armature
- AW 87012 Magnum magnets
- AW 87013 Magnet shim
- AW 87020 1" front axle threaded
- AW 87021 1-1/8" front axle threaded
- AW 87022 1" rear axle threaded
- AW 87023 Assorted brass wheel spacers
- AW 87024 Set of 0-80 axle nuts
- AW 87025 Axle nut wrench for 0-80 nuts
- AW 87026 Mag front wheels with inserts
- AW 87027 Mag front wheel set complete
- AW 87029 Mag rear wheels with inserts
- AW 87030 Mag rear wheel set complete
- AW 87030 Mag wheel set, front and rear complete
- AW 87035 # 35 rewind wire
- AW 87036 # 36 rewind wire
- AW 87037 # 37 rewind wire
- AW 87040 Rewinders armature pin vice
- AW 87041 "Track Eraser" roadway cleaner
- AW 87042 Hop-up gear set
- AW 87043 Pickup springs
- AW 87046 4 racer axles

Last minute news regarding the HOCCL Mail-in event scheduled at the HOBBY HOUSE in Monroe. The event was put off a few weeks due to our Race Director taking a long-needed vacation, after several years without one. The cars by now should be back to all of their owners and the standings posted in the records. HOCCL requested Race Director Harrison to drop a card in with each winning entry that the owner might know just where he finished without having to wait for the official word in this column.

**CAUTION:** A word of caution to all entrants in future Mail-in events. Please, do try to package all entries in a box at least two inches bigger all around than the car. At first, we felt the only good reason behind this request was for the protection against damage to the car. Now, we believe it may help our postal authorities, and they do need help, from losing any packages. We are sorry to say that after the last mail-in cars were returned we received notice from one long-time member that his cars had never been returned. Though we tried everything possible at the post office from which all the cars had been sent, we could not locate them. These cars can be insured if you wish. We here, however, cannot do this for you unless you desire it and send sufficient postage to cover the added expense. We hope that a slightly larger package will be that much harder for the post office to misplace.

Next month, a full race report on the Monroe Mail-in. PS. Look for the miniature H.O. AJ decals now being packaged in all TWINN-K products; they're HOCCL approved.



# Inside Information

By Lynn Fletcher

Continued from page 9

manufacturer's at the meeting thought that, among other things, it infringed upon the free enterprise system. After some considerable haggling, everyone agreed to try the idea out until early next year and at that time, if some weaknesses are found in the class, they will be corrected.

The second group or class of racing which was finalized was Group 12. These cars are the more common ready-to-run cars which are now on the market and, unlike the Group 20 name, the 12 means a \$12.00 maximum on retail price of any car raced in the class. The car must be raced as it comes out of the box and only weight can be added to the car, nothing else. All parts which can wear out from normal use can be replaced, such as braid, tires, gears, flag, etc. The motor type is unlimited. However, the armature cannot be epoxied or balanced and cannot retail for more than \$5.49.

Incidentally, the complete rules for these classes will be added to the national championship rules in the very near future and will be available through your dealer.

The third class was the Formula III racers which was partly explained in last month's USRA column. This class is meant to be the final controlled racing class before actual open racing as we know it now.

The motor must be the Group 20 Car Model, Mura, Champion and Cobra announced that they would be dropping their pro series races and emphasizing the new classes in any new race series.

All of these new things, combined, means a fresh breath for all dealers from coast to coast. So take advantage of it now Mr. Dealer.

On the second day, the new competition committee met to sort out the National Championship Rules for 1970.

It would take too much room to list every change, but I'll try to hit the important ones.

Wheelbase requirements have been set for all classes as follows:  
Stockers—4½ minimum  
Sports, G.T. & Formula—3-15/16 + 1/8  
Trans-Am—4¼ + 1/8

The Trans-Am is a new class and is described as being "any car which is legal for SCCA Trans-American Sedan Racing."

Four trim tabs are legal now instead of two, as in the 1969 rules. They can also be painted.

The new width for F-1 Class is two inches maximum which is closer to motor, but the chassis can be built by the racer. It must be an incline formula chassis which conforms to the national championship rules. You can either build it completely from scratch, or from a kit, or even purchase it completely built. However, if bought in kit form or assembled, it cannot retail for more than \$5.00. With those kind of prices the complete car will cost in the neighborhood of \$20.00 to \$25.00.

Now, if you've read all of this you can now see a type of ladder which can be climbed by the new slot racer from Group 12 to Group 20 to For-

mula III and then into amateur open racing.

To help the dealer get these classes started in his shop, the N.C.C. will be offering a prize package for G-12 and G-20 races. The package will include trophies, ribbons, window banners, tech sheets, scoring sheets, manufacturer's decals. Everything that's needed to have a successful race.

Another big help for the dealer is the fact that all equipment raced in these classes must be produced by legitimate manufacturers and must be purchased through a retail store. That rules out custom-made group racing cars produced by pros and sold direct by mail order.

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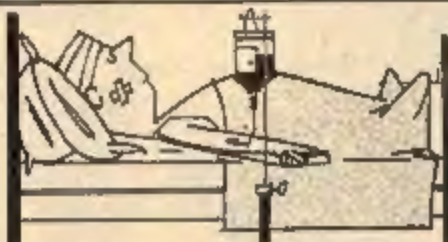


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scale on the new four-wheel drive Grand Prix cars.

Spoilers can now be  $\frac{3}{4}$ " high instead of  $\frac{1}{2}$ " as in the 1969 rules.

That's about it for major changes. There were some procedure changes, such as three minute lane changes, but I'd rather leave it alone for now, because some of the wording is a bit tricky.

Although all these changes are improvements of the 1969 rules, you won't be able to use them legally until January 1970. They will be effective for one year. The way the new competition committee is set up, any change which the committee feels must be made during the year, can be made. The committee is made up of members from every major area in the U.S. and these people will be corresponding with each other regularly, reporting on the progress of racing in their area, plus their own local problems and needs.

The third day was taken up with finalizing the details of the N.C.C. organizational structure. This included membership requirements, dues, establishing the date and place of the next annual meeting, methods of corresponding between N.C.C. Divisions, etc.

As for membership, anyone can join, from drivers on up. Each member will have a membership card which corresponds to his division such as driver, retailer, wholesaler, manufacturer, etc.

If a person is active in more than one classification, the more active class will be used. The dues structure is set up accordingly, driver's dues being very small, and the cost gradually works up to a large amount for manufacturers.

In the next issue we will have the details on how to join and who to write concerning membership.

The next annual meeting of the N.C.C. is set for Denver, Colorado, in April, 1970. By this time most of the weaknesses in the organization will be exposed and the membership can act to correct them.

Since all of the board members and vice presidents are well acquainted with each other, any problems which arise before then can probably be handled by letter or phone.

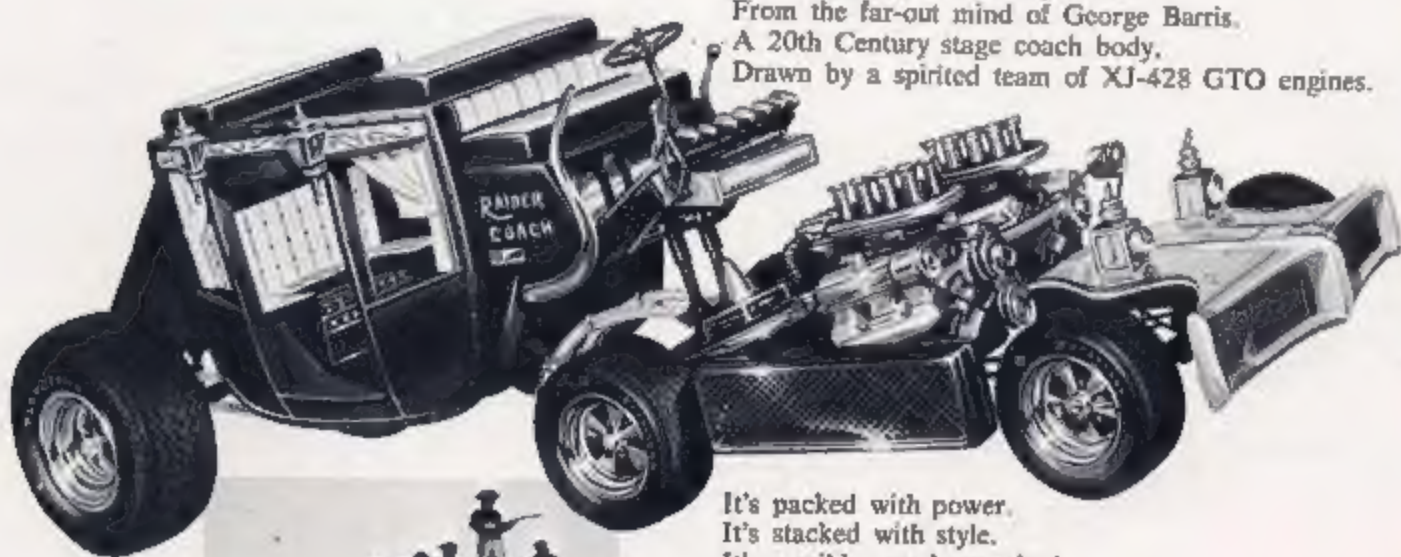
Well, that's about it. Of course I didn't report every detail of the meeting, but in upcoming issues I'll elaborate on the details of the new classes and many other things.

No matter what your feelings are about the N.C.C., good or bad, you have to remember that it was formed for you and will need your support to work. If there are things you would like to see changed, join the N.C.C. and work actively to change them. If you like what's been done and want to see it work, join and help your store owner have these races by supporting him. But whatever you do, don't sit back and wait to see what happens. Be active and support slot racing. Join the National Competition Committee.



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